THE BUILDER

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VITAL DEVELOPMENTS IN CRAFTSMANSHIP

WE have become so used to thinking of art and craftsmanship in terms of the art gallery and exhibition society that we have to re-shape our views and look outside these older manifestations, moving within their own limited circle, into the wider fields wherein vital craftsmanship is seen to be developing itself, with so much significance for the future. We must understand the different directions re-acting on each other towards the restoration of craftsmanship, not as a detached and exclusive thing, but in its wider national implications, as it affects generally the character of industry.

The Rural Industries Intelligence Bureau, which gives advice to rural workers in the different crafts associated with village life, such as woodwork, metal-work—crafts which once in conjunction together shaped the art of the wheelwright at so high a level—osier growing, basket making, hand weaving and spinning, represents one of those directions which reveal to us the desire to restore the demand for these vital industries, once so much a part of country life. In this aim we find the Village Club Associations and Women's Institutes also concerned. But this is only one side of a development which unaided can hardly solve the problem alone, though now supported by the Ministry of Agriculture.

Alongside of this, though not consciously related to it, there is a growing movement of the trained craftsman to decentralise his work out of the atmosphere of the art gallery and exhibition society, into more direct contact with the ordinary life, and to seek his market there. In the trained craftsman thus setting up for himself, free from the old exclusiveness and establishing his work on independent lines and in direct contact with the common life, we see a change of much significance. The difficulty of a market will be overcome as the numbers of those thus establishing themselves increase, for the effect of this is undoubtedly to create one. For as the small workshop, the local industry increases, whether carried on by individual craftsmen, or groups of them combining together throughout the country, the interaction on each other will be to familiarise the nation with the economic advantage of a well-wrought thing and to modify the abuses of mass production.

Thus, growing on itself, what the visionaries of reform and exclusiveness for the crafts have failed to achieve will be established. It cannot in fact be otherwise established. Until the crafts rest on the reality of what they have to offer and are brought into the ordinary life they will wither in the exhibition gallery. But we are witnessing the salutary symptom where practice replaces preaching. We have protested too much, despising the common life, and the superior person has to give way to a saner, more democratic outlook. To-day it is only the deed that bears witness, and the younger school of craftsmen see the value in relating themselves directly to the ordinary life, and that if they can offer something of value, the future market is there. This is much better than all the talk of "craft ideals" over past years, which, though of value as a stage, perhaps, have nursed an exclusiveness opposed to their general welfare, and it is impossible not to foresee that these old amalgamations will probably disappear. And it is a very positive sign of the change into more healthy conditions that they should do so.

All this has a very direct bearing on the subject, for the old inducements have less and less to offer. We have had so many calls on us to believe that this, or that society of artists contains and supports the best practise, that we are now careful of such recommendations, which appeal on the plea that they sustain ideals or encourage high standards of art. When we are told that in going to some society we shall be brought into contact only with artists and craftsmen of assured merit, and without the intervention of any "commercial medium," to find, perhaps, the same commercial medium under more disingenuous disguise, the work being neither better or worse—or perhaps worse than that of other craftsmen's work claiming no such prerogatives—we are inclined to think how unreal all this special pleading has become.

What we have said bears witness to the extent of the change which is guiding genuine craftsmanship to seek more direct relationship with the common life. The craftsman is seen to be getting on to his own legs, recognising that the best prospects for his work rest on his own independence. If the man who is strongest is he who can stand alone, it is also the case that the courage which is directing the craftsman to trust himself and his time will be found the better way.

When we examine the different developments of which we speak, they are seen to have great bearing on industry itself.

For we have not only to think of the reactions of this movement on industry as a whole, but on the craftsman himself, who, moving more in touch with the common life and understanding better its great virtues, will find how much there is to inform and strengthen his own art in this more corporate relationship. Nor can such vital developments fail to modify the attitude of labour itself, for the demand promoted by these movements for a better craftsmanship, for beauty in industry, will give new direction to his hands.

We have not yet exhausted the directions growing out of this more vital development of craftsmanship, which should react on mass production to its real improvement. For as we become accustomed to the better thing the craftsman has to give, a demand will be created compelling mass production to alter its ways. Over-production will be lessened by the demand for better production, and by thus creating esteem, extend the demand and help to absorb the field of unemployment. We produce too much when we produce badly, while we distribute employment in producing well. When we create more value such is the nature of beauty, we absorb as we create and extend the wellbeing it includes. The problem of unemployment and much else is bound up in this issue, and is largely the solution of it.

If a man enjoys his labour he will not complain at length of hours, as every free craftsman knows, who computes life not in hours, but in self-esteem and the interest of his work. Machinery when no longer man's master can come to help us in relief from unnecessary heavy bodily toil, and in its due proportion free us more for that labour which, delighting us, eases pain. Such changes must react on human relationships to bind them more together. These new and pregnant influences, as they spread, will penetrate swiftly into the dark places of modern disorder and illuminate civilisation with their enlarged conceptions, and in so doing that yearned-for miracle should yet happen—the uniting once more the ancient hereditary England with the life of to-day.

But it is not the State or multiplied organisation that will effect that which only the individual can effect for himself. And the great significance of these more vital developments of craftsmanship lies in the fact that it is the beginning of the return of individual life back upon itself, freed from too great dependence. The craftsman's labour is the type of creation, and stands as the eternal witness for the security of civilisation, and we have need to-day of the bigger concepts which instruct us that, guided by such inspiration, life will not betray us, that we can rise above the laws of the economist and the expediencies of the politician, and that at the highest it rests, not on these, but on itself.

NOTES

The Royal Gold Medallist. GENERAL satisfaction will be felt that the Council of the Royal Institute of British Architects propose to submit to His Majesty the King the name of Professor Ragnar Ostberg, Hon. Corresponding Member, of Stockholm, as a fit recipient of the Royal Gold Medal for the current year. The work of Professor Ostberg is well known to readers of this journal, and they will agree that no better selection could have been made from the ranks of foreign architects.

Architectural Competitions. WE are glad to note that at the meeting of the Royal Institute of British Architects, on Monday, it was decided that binding conditions in architectural competitions should be reduced to a minimum, and that instructions to competitors should, as far as possible, take the form of suggestions, which both they and the assessors may follow as they deem fit. Recent competition results have shown the need of some such change in the regulations concerning competitions, and we think the alteration agreed to will go a long way to satisfy competitors. Some binding conditions appear to be necessary in all or most competitions, but they should, in the light of recent experience, be reduced to a minimum.

Working Drawings at the Institute. THE working drawings of three buildings now on view at the Institute make a very interesting show of current work. There are over eighty sheets of drawings of Messrs. Courtauld's new premises at St. Martin-le-Grand, by Mr. L. S. Sullivan, F.R.I.B.A.; forty-six blue prints and four sheets of details of Devonshire House, by Messrs. Carrere & Hastings and C. H. Reilly; and fourteen sheets of drawings and five photographs of a house for Mr. Marshall, by Messrs. Hennell & James. These are good subjects to have illustrated. The prints of Devonshire House give a good idea of the magnitude of work involved in the preparation of drawings, and students will study with advantage how the plans of this fine building have been worked out. The Courtauld building shows some originality of treatment and departs more from traditional design than the other buildings, except as regards the interior details. It is a block of some 73 ft. width of road frontage with a depth of about 140 ft., and rises from the pavement to the ridge of roof to just 100 ft. The house by Messrs. Hennell & James is an excellent example of our best modern house design, and its details and general proportions have been very carefully and well considered.

Steel Houses and Union Policy. LORD WEIR makes some pointed remarks in a letter to the *Times*, on the opposition to the proposed steel houses, and in reference to the debate on Scottish housing in the House of Commons last week. He denies that he is opposed to trades unions and asserts that he is "unaware of any effective alternative to trade unionism in organised labour in this industrial country," but he considers there are defects and dangers in union policy and practice, and asks if Mr. Ramsay MacDonald is satisfied that all trade union policy or policies are always in the best interests of industry and the workers? An example of this suggests itself to which Mr. MacDonald, he thinks, might apply his mind. "There was published in the Press on February 11, extracts from a circular of instructions issued by Mr. George Hicks, general secretary of the Amalgamated Union of Building Trade Workers, to branches of his union. Some of these instructions were: 'You must watch any attempt at dilution; you should keep a keen control on overtime; adopt a militant policy against all forms of piece work; be watchful and limit apprentices; remember the power you now occupy is conditioned by the scarcity of your labour.'" Bearing in mind the two great national problems of housing and unemployment, he asks Mr. MacDonald whether he considers that the spirit and letter of these instructions are in the best interests of the workers, or of that productivity essential to the regaining of industrial prosperity? Lord Weir suggests that no reputable trade union leader in this country but will question the wisdom of a policy which to-day is so obviously anti-national.

Steel Houses and Socialist Criticism. DESPITE the remarks of Mr. Kirkwood in the House of Commons, the Government scheme to erect 2,000 steel houses in Scotland was carried without a division. The objections urged by Mr. Kirkwood and those who supported him against the scheme may be summarised under two headings: that the Weir houses are unfit for habitation and that Lord Weir's workmen are underpaid. The best answers to such criticism may be found in the speech of Mr. E. R. Mitchell, Socialist Member for Paisley. He is reported as having said that he was backed by hundreds of women in his constituency when he said that these houses were immeasurably superior to houses at present occupied by skilled artisans in Glasgow and Paisley. As to any alleged grievance on the part of Lord Weir's men, he quoted statements by some half-dozen whom he had interviewed to the effect that the work was exceptionally easy as compared with what was usual, while the pay was nearly double. One man is said to have stated that it was "a fine job," and that he knew a thousand men who would jump at the chance of such employment.

Old Timber-framed Houses. IN the *Essex Review* for January, Mr. H. E. Forrest, F.L.S., writes an interesting article on "Old Timber-framed Houses, especially in Essex," which should be read by all concerned with the reconstruction of this kind of building. Not only does he describe clearly, with useful diagrams, the various methods of framing and filling used by the original builders, but also refers to modern repair and reconstruction of old

Design for Canadian National War Monument, Ottawa.
By MR. F. BROOK HITCH, R.B.S (*See also p.* 310)

Colville Hall, Essex.
(Timber-framed Building with original brick nogging.)

work. He states that it is evident that "brick-nogging" was very rarely used originally, the uprights of the majority of old frames being grooved for laths. He describes the one or two exceptional authentic examples of original brick-nogging in Essex. The accompanying photograph illustrates one of these.

Fires in Country Houses. THE fire at Oulton Hall, with all its tragic consequences, and the four or five other recent fires in large country houses, will surely direct attention to the need of some method of promptly dealing with an outbreak of fire in isolated buildings of interest which contain valuable works of art. It is useless to think of the usual means of extinguishing fires which break out in large isolated buildings which may be some miles from a fire station, but something might be done to train the occupants of these buildings how to act during an outbreak, and how to use any available means there may be for fire prevention and extinction.

Regent-street and Piccadilly-circus. RUDYARD KIPLING'S comment on reading Beverley Nichols' personally pert allusion of "flamboyant insolence" congratulated his young critic on "that jolly good phrase," which, he added, had "pleased him immensely." Whether the expression, however, more correctly describes the following aggressive remarks by H. L. Mencken (whose standpoint in art is, of course, somewhat distracting) must be left to the reader to decide. They occur in an interview reported in Nichols' "Candid Recollections of His Elders and Betters," just published under the title of "25," which are most entertaining and lively. "I'll give you something that'll wake you up," the American said, "as I've just been looking at London. What the devil are you doing to it? Do you want to make it another New York? A filthy sky-scraper in the Strand, half the most exquisite buildings being scrapped and thrown on the muck heap, and obscene advertising signs that are as bad as anything we've got on Broadway." Asked what he would do if given despotic powers over the reconstruction of London, "the first thing I'd do," he said, "would be to hang every mother's son of an architect who was polluting one of the world's best cities. And when they were dangling high and dry I'd go out with a packet of dynamite, blow up all the monstrosities in Regent-street, get hold of Nash's old plans and slave-drive a few thousand British navvies until we'd got the thing back as it used to be—a superb crescent full of grace and beauty. Then I'd invent a whole lot of brand-new tortures for any hulking Philistine of a manufacturer who started writing his name on God's sky at night. Piccadilly-circus nowadays is an eyesore. It's bad enough in Broadway. But you can at least say there that the vast scale on which the signs are put up, the enormous size of the whole thing, does at least leave a certain feeling of awe on one's mind. Disgust, too, but at least *big*. Whereas in Piccadilly you've got a lot of footling little electric squares and circles, a yellow baby spitting fire, an undersized motor squiggling its wheels. . . . Take 'em away! You are killin' London!"

The Architectural Treatment of Reinforced Concrete. IN the paper on "The Architectural Treatment of Reinforced Concrete," read before the Institution of Structural Engineers, and reported in our last issue, the author combated the idea that a structure designed on purely engineering lines could be given architectural character by subsequently calling in an architect to ornament it. To obtain a successful result the engineer and architect must work together from the commencement, so that the building can be designed with due regard to proportion and the other architectural qualities. It is news to be told by one engineer in the discussion that what was structurally sound would be architecturally sound. If that were so there would be practically no unsatisfactory architecture as, fortunately, the great majority of buildings are structurally sound!

The Scapa Society. THE transactions of this Society, now issued, give a stimulating record of its work, directed to checking the abuses of public advertising. There is no doubt public opinion is very much with those who recognise the great evils lying in the present abuse which calls for remedy. Though we can hardly expect legislation here of so drastic a character, it is interesting to be told that the authorities in Palestine and Bermuda have issued orders forbidding all outdoor advertisements. It is strange that while the citizen must behave himself in the streets or be in peril of the constable, the advertiser is allowed to ruin the appearance of roads and public places with hoardings displaying tasteless and vulgar advertisements.

The Export of Old Materials. MR. POWYS, Secretary of the Society for the Protection of Ancient Buildings, writes to the *Times* protesting against the practice of despoiling old English houses by the removal of materials and fittings for export to America. With his protest we are in full sympathy, and we can but hope that public opinion will make itself heard to stop a trade which, in the long run, can be of advantage to no one.

War Memorial, Wotton-under-Edge, Glos.
MR. PERCY TUBBS, Architect. (*See p.* 310.)

GENERAL NEWS

Oxford Church Organ Restoration.

The sum of £2,500 is to be spent on the restoration of the organ in the University Church, St. Mary.

Birch's Shop Front.

The Victoria and Albert Museum has accepted Birch's shop front in Cornhill, which Lord Kenyon has presented to the nation.

Newcastle Church Extensions.

New vestries have been erected for the fifteenth-century cathedral church of St. Nicholas, Newcastle, to the design of Mr. W. H. Wood, F.R.I.B.A., of Cloth Market.

Coventry's Development Scheme.

The Coventry City Council has purchased 2,334 acres of the Stonleigh estate, at a cost of £110,000, to be used for purposes of development.

British Academy of Arts, Rome.

At the Annual General Meeting of the British Academy of Arts in Rome, Mr. E. Guy Dawber, President of the R.I.B.A., was elected an honorary member of the Academy.

Woking Proposed Pleasure House.

Mr. F. W. Kinns, architect, of Horsell, proposes to erect a white glazed terra cinema and dance hall, to accommodate 1,840 in all, on a site on the Guildford-road.

Liverpool Church Requirements.

It was stated at the annual meeting of the Church Building Society, of Liverpool, that £50,000 is needed for immediate church building and £50,000 for parochial halls.

Fund for British Art.

Sir Joseph Duveen is placing the sum of £1,000 annually, to be expended in the purchase of paintings by contemporary British artists, for public galleries in the British Isles.

Bequests to Perth.

The late Mr. R. H. Robertson, of Viewbank, Perth, has left £5,000 to an art gallery or art institute in Perth, and £1,000 for the restoration of St. John's Church, Perth.

Shellwood Manor.

Shellwood Manor House, Holmwood, Dorking, Surrey, and the estate of 1,076 acres, the property of the Duke of Norfolk, is to be sold by auction next May. It is one of the oldest and most historic houses in Surrey, having been given to the Prior of Merton in 1156 by Henry II.

Obituary.

We regret to announce the death of Mr. Harry Phibbs, elected Associate R.I.B.A. 1907, and Mr. Henry Chapman, elected Associate R.I.B.A. 1902.

The death has occurred at Hampstead, at the age of 75, of Mr. John R. Reid, a distinguished artist.

Bradford Royal Infirmary.

The governors have decided to proceed with their proposed new 500-bed institution at Daisy Hill, the total cost of which is estimated at £500,000. The architects are Messrs. W. A. Pite, Son & Fairweather, 12, Carteret-street, Westminster, S.W.

Carisbrooke Castle Discovery.

During the work, now completed, of preserving Carisbrooke Castle, discoveries were made which, we understand, leave little doubt that beneath the Norman keep, curtain walls and earthworks, there stands the original square castle built by the Romans.

New Baptist Church in New York.

The congregation of the Park-avenue Baptist Church has decided to erect a new church in Riverside-drive, at a cost of $4,000,000 (£800,000). The plans of Mr. Ralph Adams Cram, the architect of the Cathedral of St. John the Divine, for the building of a purely Gothic structure, were passed over in favour of those of Mr. Henry Pelton and Mr. Allen Collins, who have designed a building of steel with a stone covering in a modified Gothic style. The new church will be capable of seating 2,500 people. At the southern end will be a tower 400 ft. high and in it will be hung a carillon of 53 bells.

Mansion Fires.

Among the large mansions destroyed by fire recently are the following:—

Oulton Park, near Tarporley, Cheshire, built to the designs of Sir John Vanbrugh in the early eighteenth century, and the ancestral home of Sir Philip Grey-Egerton. Many famous paintings, much antique furniture and other *objets d'art* were lost.

Key Court, the residence near Yeovil of Colonel Cary Batten; much fine old oak panelling was destroyed.

Benacre Hall, Wrentham, Suffolk, the ancestral home of Sir Thomas Gooch.

Rating Post-War Flats.

We are informed that Mr. E. C. Christmas, of Forest Hill, has entered an appeal to Quarter Sessions to obtain a decision on the rating of post-war flats, the Lewisham Assessment Committee having fixed the rating from 75 per cent. to 100 per cent. higher than pre-war flats of same size. These flats are converted out of old derelict houses, as an example, "The Firs," a large house in Westwood-road, Sydenham—before alteration, rateable value, £109; after alteration (no enlargement), £346.

Rome Scholarship in Architecture, 1926.

The Faculty of Architecture of the British School at Rome has selected the following candidates to take part in the Final Competition for the Rome Scholarship and the Henry Jarvis Studentship, of 1926, offered by the Commissioners of 1851 and the Royal Institute of British Architects respectively: E. M. K. Ellerton (A.A.); K. E. F. Gardiner (A.A.); J. B. Wride (Cardiff Technical College); H. G. C. Spencely (Liverpool University); H. Thearle (Liverpool University); T. T. Wills (Liverpool University); J. R. Alabaster (London University); A. D. Connell (London University Atelier); B. R. Ward (London University Atelier).

COMPETITION NEWS

Branch Library, Gabalfa, Cardiff.

In this competition the assessor, Mr. Sidney K. Greenslade, has made the following awards: (1) Mr. Sidney Williams; (2) Mr. Harry Teather; (3) Messrs. Phillips and Wride; hon. mention, Messrs. Wilmott & Smith. We illustrate the first and second premiated designs in this issue.

Memorial to the Missing, Lille.

The Imperial War Graves Commission announce that the assessor (Sir Aston Webb) has made his awards in connection with the competition for the memorial to the missing dead at Lille, as follows:—

(1) Mr. H. Chalton Bradshaw; (2) Mr. V. O. Rees; (3) Mr. James Macgregor. We illustrate Mr. Bradshaw's design this week.

Houses, Diss.

The Diss U.D.C. invite architects to submit competitive designs and prices for a pair of brick houses suitable for working classes in an urban area, and conforming to the requirements necessary for the Ministry of Health subsidy under the Housing Acts. The houses to be of the non-parlour type with three bedrooms. Application should be made to Mr. G. E. K. Burne, Clerk.

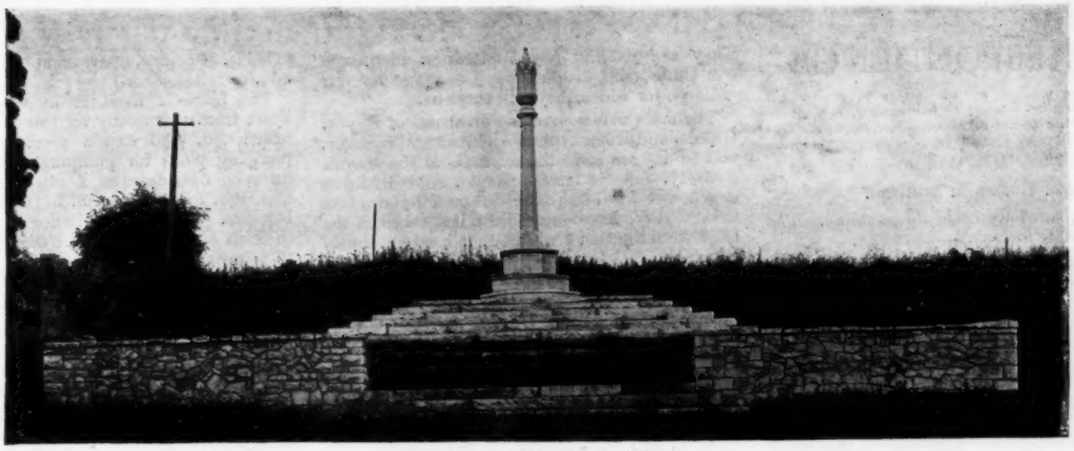
New Public Offices, Chingford.

Chingford U.D.C. invite architects to submit designs for their proposed new offices, to accommodate council and staff. Particulars may be obtained on application to Mr. Leonard C. Bowen. Clerk to the Council, on and after February 22, on deposit of £1 1s. Premiums, £40, £30, and £20. Premiated designs to become the property of the Council. Designs to be sent to Clerk to the Council by April 6.

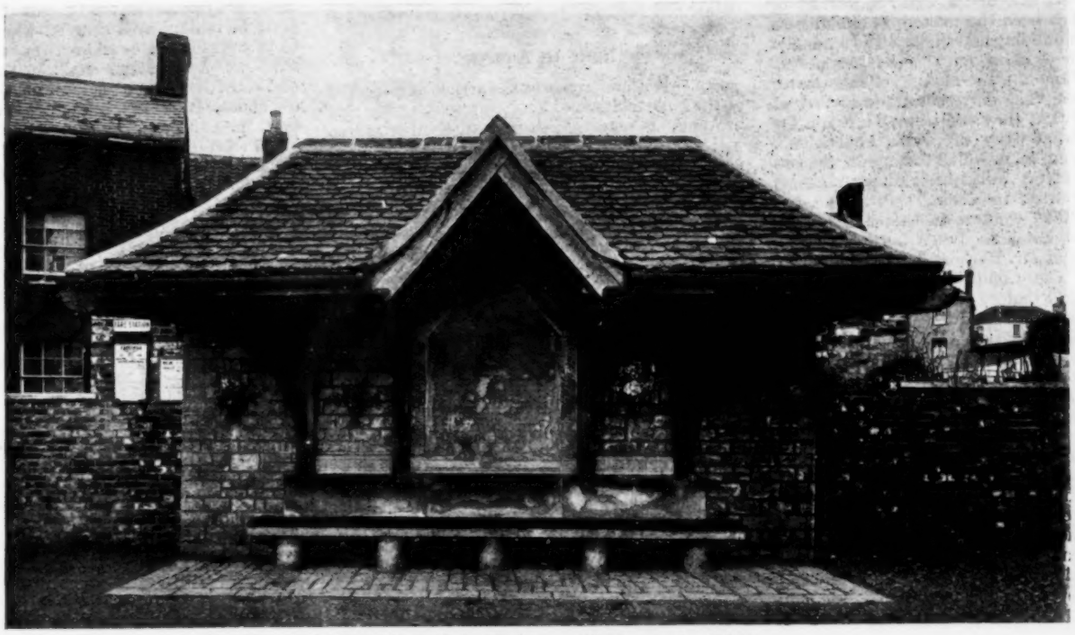
Competitions Open.

Australian War Memorial, Canberra. Open to architects of Australian birth. Apply High Commissioner, Australia House, Strand, London.....	Particulars published in "Builder." Aug. 14	Sending in date .. Mar. 31
New Offices for West Bromwich Permanent Benefit Building Society. Limited to architects within a radius of fifteen miles of Birmingham. Premiums: £100, £75, and £50. Mr. W. Alexander Harvey, F.R.I.B.A., assessor. Apply to Mr. John Garbett, Secretary, 301, High-street, West Bromwich	Jan. 15	.. Mar. 31
Public Hall, Topsham. Premiums £50, £40, and £30 respectively. Mr. Walter Cave, F.R.I.B.A., assessor. Last day for questions, Jan. 1, 1926. Designs to be sent in by April 1, 1926. Conditions from the Clerk to the Parish Council, Topsham, on deposit of £1 1s.	Jan. 1	.. April 1
Plan for construction of Conference Hall, for League of Nations, Geneva. International Competition, Sir John Burnet being British representative on Jury of Assessors. 100,000 Swiss francs to be divided among architects submitting best plans. Programmes with R.I.B.A., 9, Conduit-street, where intending competitors should apply. Single copies from Secretary-General, League of Nations, Geneva, on payment of 20 Swiss francs.	Jan. 2, 1925	—
Isolation Hospital for Infectious Diseases, Doncaster. Mr. T. R. Milburn, F.R.I.B.A., assessor. Premiums: £200, £100, and £75. Apply, Mr. W. Bagshaw, Town Clerk, Doncaster, to whom all questions must be addressed by March 8. £1 1s. deposit required	Jan. 29	.. May 10
Australian National War Memorial, Villers Bretonneux, France. Limited to Australians under special conditions. Apply Military Headquarters in capital city of each State, or High Commissioner's Office, Australia House, Strand, London. £2 2s. deposit required	Dec. 25	.. April 30
Papers on subjects connected with Heating and Ventilating. Two prizes of £10 10s. and one of £5 5s. offered by the Institution of Heating and Ventilating Engineers	Dec. 25	.. May 1
Royal Society of Arts Competitions for Industrial Designs. Apply Secretary, Royal Society of Arts	Jan. 1	.. June
Royal National Eisteddfod of Wales, Swansea, Competitions: (1) National Parliament House of Wales (Prize, £100); (2) Street Facade to a Large Stores (Prize, £25); (3) Set of Measured Drawings of Architecture (Prize, £25). Apply for programme to publishers, Messrs. Morgan & Higgs, Heathfield-street, Swansea (1s. 2d. post paid). Mr. Arthur Keen, F.R.I.B.A., Assessor	Nov. 6	.. July 15
Incorporated Architects in Scotland: (1) Rowand Anderson Medal and £100: City Art Gallery and Museum; (2) Rutland Prize (£50) for Study of Materials and Construction; (3) Prize (£10 to £15) for 3rd year Students in Scotland; (4) Maintenance Scholarship, £50 per annum for 3 years. Apply Secretary of the Incorporation, 15, Rutland square, Edinburgh	Nov. 6	—
Secondary School for Girls, Worcester. Premiums 100 guineas and 50 guineas. Mr. Herbert T. Buckland, assessor	Dec. 11	.. —
Infectious diseases hospital, Blaydon, for 72 beds. (Date of application for particulars now passed)	Dec. 18	.. —
Builder (Constructional Problem) Competition for those not over 25 years of age engaged in the pursuit of architecture and building. See announcement each week.	—	.. —
*Proposed new church, Monmouthshire	—	.. —
*Proposed new school, Gosport	—	.. —
*Proposed new hospital, Guisborough	—	.. —
*Downham Market U.D.C. Housing Scheme	—	.. —
*Scheme for building large residences, Cairo	—	.. —

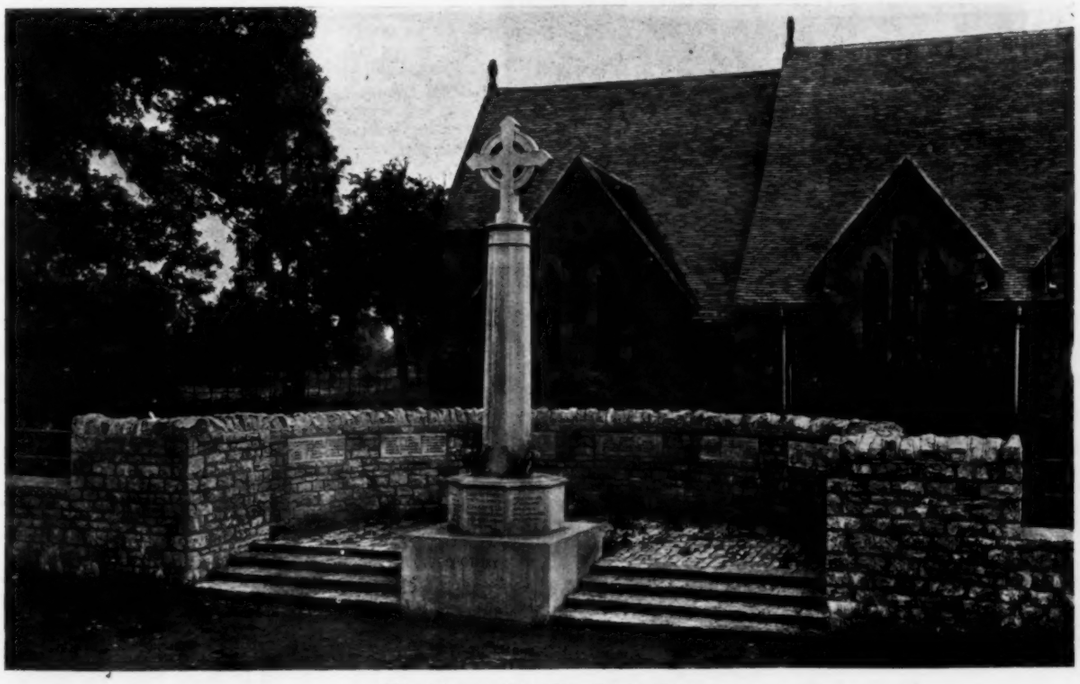
* Competitions when "warned" or vetoed by the R.I.B.A. are starred.



War Memorial, Cam, Glos.



War Memorial Shelter, Kingswood, Glos.



War Memorial, Charfield, Glos.

MR. PERCY B. TUBBS, F.R.I.B.A., Architect. (*See p.* 310.)

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Steel Houses in Scotland.

"If only we cared we could do anything. The mind is lacking."—LETHABY.

SIR,—Your admirable leader in the issue of the 12th inst., giving a survey of "Housing and Town Planning in Scotland," shows how far we have travelled (backwards) since the days of Brown, Craig, Adam, and Playfair. It is unnecessary to ask: "Stands Scotland where it did?" The Government's decision to force 2,000 steel houses on Scotland fully answers this question. The two main pleas set forth for this step are: Shortage of plasterers and the necessity of providing houses for dwellers in the slums.

Since the war one of the main industries in the country has been the making of substitutes for all kinds of building materials. The tendency with all forms of substitutes is that, sooner or later, it develops into the making of substitutes for substitutes. The only redeeming feature of substitutes is that they can never be taken for other than what they are, viz., substitutes. This age is being stamped as the age of veneers and shams. Every substitute adopted means in the long run an increasing shortage in the number of skilled workers in the country, for men will not enter a dying industry. One would think that Mr. Herbert A. Welch's recent lecture on "The Condition of the Building Industry," read before the Royal Institute, would have aroused all interested in the future of building to realise the tragic end to which the country is drifting.

The boast of Augustus was that he "found Rome brick and left it marble," but if the present Government gets its way, their only boast can be that they found Scotland stone and left it iron. Even from an economic point of view, there could hardly be a worse investment. If a fraction of the money spent in subsidies since the war had been spent in speeding up the training of apprentices to meet the shortage in certain industries, the Housing Problem would have been solved. The Government have adopted a short-sighted panic policy. They are defiling our landscapes, increasing our slums, and keeping up a heritage for our children for which they will curse us.

The main evidence of the greatness of Egypt, Greece, and Rome is their architectural remains, and to-day we have the example of the Mayan dynasty, once a great people, now living a degenerate life of squalor in mud huts. Can it be that we have entered the last stage on the road to extinction? Who that has seen a steel house can fail to picture the possible culmination of this degradation? Is imagination and romance dead? Have we become a nation of dead souls? Have we no pride in our great inheritance? Where is the spirit which created Melrose and the glories of our forefathers?

"If only we cared we could do anything. The mind is lacking."

If only we would scrap our differences and unite in one supreme act of self-sacrifice the country might yet be saved from this awful visitation. There is no other way.

WILLIAM DAVIDSON.

Notes on America.

SIR,—With reference to the article on page 270 of the current issue of THE BUILDER, under this heading, I regret I cannot altogether agree with Mr. Bennett's statement as to the general use of the "cellar," as mentioned in the first paragraph of the article. I have seen quite a few of this type of house, and have lived in them in New Jersey (U.S.A.) and in Eastern and Western Canada. The one in New Jersey, although quite a small house, had a very fine basement, which was fitted with a full-size door leading to the garden (screen door in summer). The inside was fitted with two laundry tubs with hot- and cold-water service, and in a general sense these apply to practically any size of house in the U.S.A. and Canada, as laundry work is done more at home than in this country, and in the larger houses where maids (helps) are kept there is usually the laundry maid. Of course this does not so much apply to city life, where Chinese laundries are the general rule. There was also the central-heating furnace for winter use, a place for the storage of coal, and a separate one for wood, both with outside shoots. In addition, there was a light and airy place for the storage of provisions, which was quite cool even in summer. (This is, of course, apart from the inevitable ice-box, or refrigerator.)

The house I lived in in Western Canada, apart from practically all the apparatus above mentioned, also had a pressure tank and a pumping plant for pumping water from some distance outside, and I might add that this was right up in the bush, in the foothills of the Rockies. In the face of these facts, I venture to think that Mr. Bennett's description is likely to be misleading.

"INTERESTED."

Design for Canadian National War Monument, Ottawa: Sculpture Group.

By MR. F. BROOK HITCH, R.B.S.

JACOBEAN MANSIONS

IN the third lecture of the series on "English Renaissance Architecture," given at the Central School of Arts and Crafts, Southampton-row, Sir Banister Fletcher dealt with the characteristic mansions of the Jacobean period, that most interesting transitional epoch of English architecture, in which a more conscious attempt was made to systematise the Classical element in the style in buildings as ordered wholes, while the Gothic tradition remained in the mullioned windows and manor hall, with "screens" and dais. Sir Banister described, with the aid of slides, Hatfield House, Herts, one of the most splendid examples of the style; Aston Hall, Warwickshire; Holland House, Kensington; Blickling Hall, Norfolk; and other country seats. Mention was made also of the architects responsible for these mansions, including John Thorpe, Huntingdon Smithson, and others. The next lecture (February 24), will deal with the characteristics of the architecture of the seventeenth and eighteenth centuries, outlining the work of Inigo Jones.

SOME RECENT WAR MEMORIALS

WE illustrate in this issue four war memorials in Gloucestershire, designed by Mr. Percy B. Tubbs, F.R.I.B.A. The one at Wotton-under-Edge was completed in 1920, and is of Portland stone with granite inscription panels on the four sides of the base, three of which bear the names of the men of Wotton who were killed in the war. A surmounting urn, which was carved by Mr. Henry Poole, A.R.A., who also carried out the ornament on the small pediments, bears the crests of the Army, the Navy, the Air Force and the Nursing Services on its four sides. The cost was £587. The stonework was provided and fixed by Messrs. F. J. Barnes, Ltd., of Portland.

The memorial at Cam was completed in January, 1922. It is on the main road opposite the ancient village school where most of the men who served in the Forces were educated. The design follows the mediæval Gloucestershire cross, and the names of the fallen are inscribed on the octagonal base. The wrought stone was supplied and fixed by Messrs. F. J. Barnes, Ltd., of Portland.

The memorial at Charfield was completed in January, 1920. It stands on a small piece of land taken from the churchyard and entered from the road. The names of the men who served in the Forces are inscribed in panels in the semi-circular wall behind the monument, but the names of the men who were killed are carved on the base of the monument itself. Messrs. Barnes, of Portland, provided the monument and panels, but the surrounding wall was built of local stone.

In the case of the memorial at Kingswood, the instructions of the War Memorial Committee were to provide a memorial in the shape of a shelter, where passengers could wait under cover for the motor bus which serves the village. The roof is supported on curved oak struts, and is covered with local stone slates. The oakwork is finished with an adze. The inscription panel under the gable is of Portland stone. The monument, which was completed in May, 1922, was carried out by Mr. Rowley Wyatt, of Kingswood.

SOME OBSERVATIONS UPON THE CONDITION OF THE BUILDING INDUSTRY—V

BY JOHN ANGUS.

[*** The opinions expressed in this article are not necessarily our own.—ED.]

AN obvious comment arises from these notes upon the position of the building trade. It has been suggested that where trade is flourishing, there can be no point and object in conveying a contrary impression. The reply is that the building trade, which apparently is in an extremely strong position, is being subjected to hostile criticism from the public, and is being actively attacked in its sphere of operations. No object is served, therefore, in keeping back or minimising impressions which represent current feeling upon the matter.

To an onlooker, however biassed he may feel towards an industry with which he has been associated, it would seem to be a mistake to omit to state the feeling that the building trade is deliberately alienating public support. It is in the true interests of the building trade to state this impression, not with the desire to imply censure, but in the hope that any advice will be accepted in the proper spirit. Quite apart from attempting to secure the good will of the public, it is a sound business axiom that no trade can be maintained successfully which is flagrantly opposed to the interests of the public. Possibly the public may be misinformed, but so far as the building trade is concerned, there is no evidence that facts which have been in dispute have been fully or satisfactorily explained.

It seems unnecessary to state that for several years the whole country has suffered terrible hardships through a housing shortage. If houses were not a necessity the position or the attitude of the building trade would be matters of no concern to the public. It is only fair to state this, but the hypothesis implies the inference that the attitude of the building trade would have been considerably modified. In other words, the urgent needs of the public were the opportunities of the building trade. From a number of causes the building trade failed to cope with the acute housing shortage which, so far as one could see, was likely to continue for another generation.

The building trade for some years has been able to provide ideal conditions for its members. When the steel house and other alternative methods of building came into operation their significance was unmistakable. The forces at work represented the struggles of a community which was being pressed too far. The danger was obvious for some considerable time before the steel house came into being, and the constant appeals from the country to explore fresh methods of building ought to have been sufficient warning. The warning was not taken. Naturally, the consequences are resented by the building trade unions, and their attitude is equally resented by the general public. It must be confessed that it is difficult to believe that the building trade does not realise that it invented the steel house by deliberately inviting it. The fact is there, nevertheless, and in the circumstances there can be no question that the public has every justification in its efforts to deal with the housing shortage and the unemployment problem at one and the same time. Conversely, the building trade has every right to pursue a labour policy which it considers to be in its own interests, but where it comes into conflict with the interests of the community a choice or compromise must be made. The real problem before the building trade does not appear as a simple matter of blocking or hindering the opposition by resorting to threats; it is a matter of visualising what the ultimate end is likely to be.

So far as can be gathered from the Press, the attitude of the building trade unions towards the steel house has been unconvincing throughout. They consider it to be structurally unsatisfactory, but they will raise no objection to it if building trade wages and conditions govern the construction and erection of these houses. As an attitude, it is wholly illogical and anti-social. In plain language, it means that those who are in distress through lack of houses must not have them unless they cost a little more. When the word substitute ceases to have any economic meaning, it may be taken that the rights of the individual have been extinguished. The contention that the steel house "attempted to superimpose upon the building industry a lower rate of wages," is merely another method of saying that another competitor is in the field. It is just as easy to invert the contention by saying that the building trade are seeking to superimpose upon the engineering industry a higher wage, to neutralise the economic advantages of the building substitutes which have been evolved, and to prevent the industry finding work for its unemployed members. It has been already pointed out that the building trade cannot pursue its own labour policy and at the same time dictate that of others if the community thinks differently.

There are no doubt several building substitutes towards which the building trade have no objection, but the Weir house is deliberately introduced into these observations, not because it is better or worse thany any other alternative house, but because it brings in the question of a lower wage rate. It cannot be accepted as a principle that it is the function of an article which defines the wage, and that the nature of the work is immaterial. In point of fact, the plea itself is hardly worth discussing; it is merely significant as an excuse to maintain an artificial position which is extremely vulnerable.

There are certain aspects in this new development of the housing problem which can only be matters of opinion. It is evident that a large section of the public is convinced that a strike on the part of the building trade would result in ten steel houses taking the place of every one now being built. There is the further point that no one can say that the steel house will not remain as a permanent factor in the housing of the future. The solution lies almost solely with the building trade, but if the solution is to depend upon practical results or upon political argument, it is not being too rash to say that, if the building trade depends for its future upon anything other than the work of its hands, it must be prepared for a curtailment in its sphere of operation.

It is to be hoped that the matter will be seen in this light. The building trade begins with a big advantage over its competitors, and it cannot be in doubt that everyone sincerely regrets the necessity to replace our traditional methods of building. The building trade produced the steel house and is now taking the direct method of proving that it was a necessity. A true conception of the situation would be for the building trade to meet opposition in an open, competitive manner, and in doing so it would be strengthening its own position and lessening the danger in the future. Obviously the only method of doing this is to increase the amount of labour and the output. No other method holds out any hope of success.

If any member of the building trade is in any doubt about the fairness of these conclusions, let him visualise a permanent social state in which house rents and costs of building will always be beyond his economic means. This conception of a builder's utopia would mean, not that the State was subsidising houses, but that everyone, including builders, was being granted a bonus on his salary to enable him to live in a house! If anyone cares to develop the argument far enough, he will see that if the building tradesman cared to insist upon more leisure, he could never hope to be able to live in a house he had helped to build.

The whole tenor of these observations will have been misunderstood if the only impression conveyed is that the writer has as his object the desire to advertise the steel house in opposition to the building trade. On the contrary, any form of house—so long as it was habitable—manufactured and erected by labour outside the building trade would have created a similar situation, and would apply equally to these observations. The sole object in writing is to point out the danger and to draw attention to the method of meeting it. The public attitude on this matter cannot be in doubt, nor can it be questioned, and the building trade should devise an administrative policy which, if it recognised the situation fairly, would result in a logical method of meeting it.

A final note in conclusion might be included upon the prevalent idea that houses were too cheap before the war. An idea of this nature postulates either that houses were cheaper than other commodities or that everything was too cheap. If it means that houses were cheaper than other commodities, it is a fallacy; and if it is believed that houses will remain on a higher price basis than other products, disillusionment is certain. If it is believed that everything was too cheap, the belief has no meaning without reference to wages and their purchasing power. It is not possible for any single industry to maintain conditions which have no relation to those of any other trade or Society generally. There is such a thing as an economic basis, which is relative, and if it is out of gear in certain directions at the moment, it is bound to come into operation in time. This aspect has a distinct bearing in the opposition which the building trade is resisting at the moment. If it is determined that the houses of the future shall cost more, other products will be precisely on the same basis, but the purchasing power of wages will be lower.

MEETINGS

SATURDAY, *February* 20.

Architectural Association.—Visit to Dorchester House and Sir Philip Sassoon's House, Park-lane.

MONDAY, *February* 22.

The Architectural Association.—Mr. H. M. Fletcher, F.R.I.B.A., on "The Architecture of Cambridge." At 34, Bedford-square, W.C.1. 7 p.m.

The Institution of Structural Engineers (Midland Counties Branch).—Mr. H. F. Lea on "Arterial Road Construction." At the Birmingham Chamber of Commerce. 7.30 p.m.

WEDNESDAY, *February* 24.

L.C.C. Central School of Arts and Crafts.—Sir Banister Fletcher, V.-P.R.I.B.A., on "Character of the Later Renaissance: Inigo Jones and his Works." 6 p.m.

Liverpool Architectural Society.—Paper by Mr. H. S. Goodhart-Rendel. 13, Harrington-street.

London County Council School of Building.—Mr. W. C. Freeman on "The Production and Modern Applications of Dissolved Acetylene." At Ferndale-road, Brixton, S.W.4. 7.30 p.m.

Surveyors' Institution (Warwick, Worcester, Staffs and South Derby Branch).—Visit to the Potteries, and Mr. J. N. Edmonds on "Incidents connected with Manorial Courts, Worcestershire."

THURSDAY, *February* 25.

Society of Antiquaries of London.—Mr. G. H. Jack on "Ancient Bridges in Herefordshire and their Preservation." At Burlington House, W.1.

Institute of Public Administration.—Mr. G. Topham Forrest on "London 100 Years hence." At Montague House, Whitehall, S.W.1. 6 p.m.

Institution of Electrical Engineers (Irish Centre).—Professor S. P. Smith on "An All-Electric House." At Trinity College, Dublin. 7.45 p.m.

Liverpool Architectural Society.—Annual Dinner. At the Adelphi Hotel.

FRIDAY, *February* 26.

The Royal Sanitary Institute.—Mr. S. E. Burgess on "Housing and Main Drainage." At the Municipal Buildings, Middlesbrough. 7 p.m.

THE PLANNING AND EQUIPMENT OF THE SMALL HOUSE.—V

By EDWIN GUNN, A.R.I.B.A.

A ROOM AND ITS PARTS.

The Ceiling.

THE ceiling, in the nature and design of its surface, may contribute to the general design or detract from it. Not everyone is fond of the "beamed ceiling" of the local auctioneers' announcements; the blessedness of the word "oak" (which seems to produce in the æsthetic field a rapturous thrill akin to the word "concrete" among the substitutive economists) is not so absolute as might be thought. It is often possible to improve structural stability and effect economy by the use of beams with reduced common joists; and provided the design generally takes cognisance of the existence of the beams they may be employed openly; but except in definitely imitative work the actual floor-joists are better covered by some sort of ceiling. Unless exposed joists are made quite twice the width that economy dictates their effect is bad and mean, and in any case an open floor has a crushing effect and detracts from modern methods of lighting. It is, in fact, an anachronism.

Given the plaster ceiling, texture, colour and possible enrichment remain to be decided. The dull, flat white ceiling, though an aid to lighting, has little other claim to regard and is a survival from Victorian satisfaction with mechanical finish. A ceiling finished with a grit coat and surfaced by the wood float used with a swinging full-arm sweep has a pleasant texture, shows any small surface cracks but slightly, and if composed of lime and sand without any hard plaster gauging will finish naturally to a parchment-like colour, pleasant enough to leave without any artificial colouring when in conjunction with oak beams. If distempered, a tone of cream is preferable to dead white, which, in conjunction with the gritty texture, would give a coldly grey effect.

Enrichment may take the form of shaping, moulding, or modelled surface ornament. The small house offers little opportunity for vaulted, wagon, or coved ceilings; such features are excluded on the twin scores of pretentiousness and cost. The one possible exception is in vestibules and halls. A square vestibule may be covered by plaster groining, or a rectangle not less than 5 ft. by 7 ft. 6 in. by a segmental barrel ceiling at no great cost and with pleasant effect.

Plaster cornices are out of fashion—undeservedly, for they are an inexpensive means of importing a touch of interest and softening a crude junction. They should, however, be on modest lines, and the fillets should be quite delicate—rarely over ½ in. In profiling always consider whether any salient angles will show an outward mitre A simple cove with a narrow fascia is both practical and safe in most cases. Another form in which moulding may be employed is a flat band about 5in. wide, either round the margin of a ceiling or as a circle inscribed in a square room, serving to accentuate its squareness.

Modelled ornament is a cheap and effective means of lending interest to focal points. Softly-modelled fibrous plaster pateræ from 4 in. to 12 in. across may be obtained from several makers, or it is quite amusing to model and cast them specially, and a certain degree of naïveté is not inappropriate. In such situations as the centre of a chimney-breast projection above the freize, the lunette produced by a wagon ceiling, the corners of a rectangular ceiling, or the spandrels of one decorated by the inscribed circle before described, these softly modelled "bumpy" ornaments give a spice of interest which may make all the difference between a bleak box and a pleasant room.

The Floor.

A floor which is to be close-carpeted can, of course, be treated from the practical standpoint alone; but in all other cases the surface, colour, and "lines" of the flooring material play a part in the effect of apartments. Speaking generally, a floor without apparent joints is dull and uninteresting, which must be the reason why many excellent plastic materials unfailingly strike the wrong note in domestic interiors. The cove skirting joining walls and floor without line of demarcation, too, though doubtless sanitary, does not conduce to a pleasant effect.

A quarry tile floor gains enormously if the joints are admitted, and no effort made to minimise them to the point of virtual invisibility. A good way to lay such a floor is to bed the quarries with loose strips of sawn lath in the joints as a guide when laying, filling the surface joints later with weak cement mortar—say 1 to 8—and, after setting, cleaning the surface. Hearth tiles set in this way also look well, and the surrounds to fire-grates. Tiles so fixed can have the joints eased so as to avoid half-tiles, the margin being taken up by varying the joint width. The joints should follow through checker-fashion with no attempt at "bonding," which destroys perspective.

Wood-block floors may be checker, basket-weave, or herring-bone—the last may be thought restless owing to its numerous oblique lines within rectangular confines, but in effect the streaks of the opposing rows of blocks give an appearance of parallelism. As in the case of boarded floors the lines should run the long way of the room.

Boarded floors look well in good wide boards —like the elm floors of most old country buildings in the home counties—but such seasoned planks are not obtainable for the small house. From the wide surfaces and few joints of this type of floor it is best to go to the other extreme—as narrow boards as may be, with multiplicity of joints, minimising shrinkage. If a hardwood floor is desired it is generally fruitless to put this in when the house is new—it will inevitably swell, and later shrink. The American practice of laying a deal sub-floor enables the hardwood floor to be put down after as long an interval as may be necessary for the building to dry out, and as the thickness of the hardwood may be considerably reduced—even to ½ in. (the sub-floor being finished by that thickness below the final floor level), the cost is not ruinous.

The colour of flooring need not so necessarily be brown as it would seem from general practice. A painted floor can often contribute to effect. A pleasant and useful trick is the painting of a black band 3 in. high round the bottom of skirting and across doors. This will receive the usual rubs and scratches which occur at this level, and may even lengthen the interval for periodic repainting.

Treatment of Chimney-Breast.

EXHIBITION NOTES

EXHIBITION OF THE CHURCH CRAFTS LEAGUE.

This little exhibition, tucked away in the Hall of the National Society in Great Peter-street, Westminster, and open only from the 8th to the 12th inst., in order, no doubt, to synchronise with the sitting of the National Assembly during the same week, was not without interest. The League has for its object to bring the clergy into direct contact with artists and craftsmen of "assured merit, and without the intervention of any commercial medium." This solicitation on behalf of the clergy was not, unfortunately, being rewarded on the occasion of our visit, as there were none there. The craftsmen thus combined to offer these special privileges would not, of course, advertise, and we are anxious to acquit them here, and even if unable altogether to do so, their statement of aims should be regarded as of that kind which calls itself "truth in advertising." It is our fault, therefore, that, while doing justice to the merit of particular examples, we are unable to identify in the works shown any special characteristics which differentiate the exhibition from others making no such claims. The exhibition included a variety of examples representative of different crafts, such as metal work, modelling, stained glass, illuminating and embroidery. The ecclesiastical metal work shown by the Artificers' Guild, Ltd., and by Mr. Omar Ramsden, were among the principal exhibits. A small and very charming panel of stained glass by Mr. Woore was noticeable for nice treatment, and cartoons also shown by him had much vigour and appreciation of their purpose. Miss Whall showed glass of refinement and character. The modelled reliefs by Miss Rope had the charm which we associate with her work. The photographs of completed work, such as those shown by Mr. Stoddart, suffered from over-elaboration not justified by any inward necessity, and we yearned for less elaboration and more content. We felt, on leaving this exhibition, that there needs further proof of professions which were not so immediately apparent in the work shown, as in the printed statement on the invitation card, and we would venture to advise this little society that to rest on the merits of its work is a better way.

Proposed Sculpture Exhibition.

The City Corporation has received a letter from Mr. W. Reynolds Stephens, President of the Royal Society of British Sculptors, on the subject of an exhibition in the Art Gallery of statuettes and small examples of sculpture by living British sculptors, and has recommended that the Committee be authorised to expend a sum of £300 in connection therewith.

SOCIETIES AND INSTITUTIONS

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Mr. E. Guy Dawber, P.R.I.B.A., has received the following letter from Mr. D. Everett Waid, President of the American Institute of Architects :—

Dear Mr. Dawber,—The fifty-ninth Convention of the American Institute of Architects will occur in Washington, D.C., May 5, 6 & 7, 1926. We should like all members of the Royal Institute of British Architects to know that they will be as welcome to attend as our own members. Any of your members who may find it possible to be present will receive further information if they will kindly send their addresses to our Secretary, The Octagon House, Washington, D.C. You, Mr. President, will be thrice welcome if you can pay us a visit. With high esteem, believe me, faithfully yours,

D. EVERETT WAID,
President, A.I.A.

Exhibition of Garden Design.

It is proposed to arrange an exhibition of drawings, prints, plans and photographs, illustrative of garden design, in the R.I.B.A. Galleries during April. It is hoped that the exhibition will include designs of gardens both old and modern, public and private, British and Continental. The exhibition will run from April 7 to 21, and a lecture on "Garden Design" will be given by Mr. F. Inigo Thomas, F.S.A., on April 14, at 5 p.m. Members of the R.I.B.A. who have in their possession prints, photographs and drawings (measured or otherwise), which are suitable for this exhibition, are invited to send them in for the consideration of the selection committee. The following conditions should be carefully noted :—

(1) The exhibition is intended primarily to be one of garden design and planning, but illustrations of garden architecture and ornaments, such as orangeries, pergolas, and statuary, may be submitted if desired.

(2) Exhibits should be in reasonably good condition for exhibition purposes.

(3) Photographs should be as large as possible (unless they are submitted merely to illustrate a plan), and should be mounted. They need not be framed.

(4) All exhibits should be clearly marked with their title and the owner's name and address.

(5) Exhibits must be addressed to the Secretary, R.I.B.A., and must be received by him not later than March 20.

(6) All exhibits will be insured against all risks while in the possession of the R.I.B.A.

Amendments of the By-laws of the R.I.B.A.

By an Order of the Lords of His Majesty's Privy Council, dated February 5, 1926, the following amendments to By-law 25 have been approved :—

By-law 25 to be amended as follows :—

"25.—Any charge under the preceding By-law 24 must be preferred in writing and signed and forwarded to the Secretary, who shall lay it before the . . ." &c., as printed, down to ". . . such record and publication,"

"During the period of suspension, the member shall not be entitled to use the title 'Chartered Architect,' or the affix of the class to which he belongs, nor shall be he entitled to the use of the Library, attendance at Institute Meetings, or right of voting, and his name shall not be printed in the list of members in the 'Kalendar' during the period of his suspension, and he shall return his Diploma for such period. Before any member so suspended is reinstated, the Council shall consider any further complaints as to his professional conduct during his period of suspension, and if not deemed satisfactory, may decree a further period of suspension or his expulsion; in either case, the above procedure of announcement and publication shall again be followed."

"Provided always . . ." &c., to end of By-law, as printed.

Nomination for Royal Gold Medal.

At a business meeting of the R.I.B.A. on Monday evening last (Sir Banister Fletcher, Vice-President, in the chair), it was announced that the Council propose to submit to His Majesty the name of Professor Ragnar Ostberg, Hon. Corresponding Member of Stockholm, as a fit recipient of the Royal Gold Medal for the current year.

Competitions.

Mr. Herbert W. Wills moved and Mr. H. D. Searles-Wood seconded the following :—

"That the Regulations for the conduct of architectural competitions be amended by the adoption of one of the two following changes (*a*) or (*b*) and the addition of Clause (*c*). Details to be left to the consideration of the Competitions Committee.

"(*a*) All binding conditions should be eliminated. Instructions to competitors to take the form of suggestions which both they and the assessor may follow as they deem fit.

"(*b*) That binding conditions be retained and that in case a competitor considers they have been ignored he shall have the right to appeal to the Competitions Committee of the Institute. In doing so he shall pay an agreed deposit to the R.I.B.A., such deposit being forfeited to the R.I.B.A. if his complaint is considered by the Competitions Committee to be unfounded. If, on the other hand, they find on investigation the complaint is justified they shall so report and the award shall be quashed, and a new assessor appointed by the President, who shall assess the whole of the designs sent in and to whom the assessor's fee agreed upon shall be paid.

"(*c*) Whenever architects are invited to send in applications and qualifications for selection for a limited competition, such invitation shall be advertised at least on three different dates during a period of not less than one month."

(*b*) and (*c*) were not carried, and (*a*) was amended on the motion of the Hon. Secretary, Mr. Stanley Hall, as follows :—

"Binding conditions should be reduced to a minimum. Instructions to competitors should, as far as possible, take the form of suggestions, which both they and the assessors may follow as they deem fit."

This amendment was carried.

MODERN PAINTING.

ON Thursday, February 11, Mr. Frank Rutter, B.A., lectured on futurist painting at the Grosvenor School of Modern Art, at 33, Warwick-square, S.W. 1. He said that the futurist painter, discontented with the restrictions of his canvas, wished to depict movement, and to this end accentuated or added diagonal lines. The most striking example of this method shown on the screen was entitled "Centrifugal Force," the idea of which is represented by segments of concentric circles crossed by spears. The picture, carried out in blue and gold, was a very effective representation of a rapidly revolving disc shooting off sparks. In a war picture the suggestion of a body of troops on the march was made by accentuating the sloping rifles; this gave a forward movement to a cohesive mass. A less satisfactory method was illustrated in the picture of a dog walking, where the legs were multiplied to giving a twinkling effect. This led to the idea of depicting time, to endeavour to express a sequence of movements, as is done in such other arts as the drama and dancing. The exponents of this phase of futurist painting painted not only what they saw (said the lecturer), but what they knew to be there.

THE ABUSE OF ADVERTISEMENT.

"THE Abuse of Public Advertisement" was the subject of a lecture given by Mr. John Bailey in the hall of the Royal Society of Arts, Adelphi, on February 13. Sir Albert Gray, presiding, referred to the illuminated advertisements in Piccadilly-circus, and said he believed that the majority of people thought they were deplorable. In the daytime they could see that the apparatus required for these flashlight signs was a gross disfigurement of the fronts of buildings.

Mr. Bailey said that he believed the object of the London Society was the preservation of the charms of London. There could be no doubt that this charm was impaired by advertisements. America was even worse than England in this respect, for there the signscape had replaced the landscape in the great cities. This had spread righteous indignation among the more intelligent class, who were urging strong legislation—so drastic that it would cause the removal of a million hoardings. Not only should the senses of smell and hearing be protected, but sight should be also safeguarded. The general agitation of feeling in the United States had led to the formation of bodies to protect residential buildings and the countryside: these were wanted in England. Last year he had visited Verona and was humiliated to see the degrading spectacle of the disfigurement of the great Roman amphitheatre by advertisements of somebody's beer covering its steps. We were not so bad—we did not obstruct the view of Westminster Abbey, St. Paul's, or Hampton Court by hoardings, but one could not walk along the Embankment by the side of the most famous river in the world without having electric signs spoiling its beauty. Many of our famous buildings were submerged in floods of incongruous and irritating advertisements. Those who motored out of London had to drive between lanes of hoardings which had supplanted the hedgerows. Everyone should be allowed to use the roads they paid for without their pleasure being spoilt. Could we not leave certain places in towns set aside for these purposes, which were admittedly useful? Then people who wanted any goods could go there and study the hoardings for what they required. The public knew what it wanted, and it should induce the local authorities to use the power Parliament had given them.

In the discussion that followed, Sir Charles Walston admitted the right of existence of advertisement, and insisted on the freedom of the individual—but they must stop the individual from infringing on the rights of others. In his opinion advertisements should be heavily taxed.

Mr. Canning, as a representative of the advertising profession, said that the London County Council were making laws to restrict and prohibit 6-ft. advertisements in certain streets but at the same time still ran trams carrying 12-ft. advertisements through those same streets.

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.

THE fourth annual dinner of this Association was held at the Central Cafe, Reading, on January 27, Mr. H. S. Rogers, M.A., F.S.A., F.R.I.B.A., presiding.

Mr. J. Wells, Vice-Chancellor of Oxford University, in proposing "The Town of Reading and Its University," spoke of the close connection between Oxford and Reading, and congratulated the town in that it was shortly to have a University. He wished architects would persuade people that an old building that was serving its purpose should never be destroyed because it was out of date.

Mr. E. P. Warren (Past President of the Association) proposing "The Royal Institute of British Architects," said it was gratifying that architecture was becoming a prominent feature of the life of the country.

Major Barnes responded and Mr. C. F. Ward (President of the South Wales Institute of Architects), replied for the Allied Societies.

Mr. Ian MacAlister gave the toast of "The Berks, Bucks and Oxon Architectural Association." Mr. H. S. Rogers, in response, said they realised the geographical difficulties of the three counties, and would have seriously to consider the position in the near future.

Replying to the toast "Our Guests," given by Mr. R. A. Rix, Mr. C. P. Lovell (President, Southern Counties Federation of Building Trades Employers) emphasised the need for co-operation between architects and builders.

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ILLUSTRATIONS

Proposed Building, Quay-street, Manchester.

We illustrate this week the design, by Mr. Joseph Sunlight, for a great new building to be erected near Deansgate, Manchester. It will have twelve stories, the height being 135 ft. from pavement level. There will be three frontages—in Quay-street, Atkinson-street, and Little Quay-street, and each will be 150 ft. in length. The design will be repeated on each front, except on the one to Atkinson-street, where there will be an entrance to a cartway instead of a shop front at the end. The cost is estimated at a quarter of a million pounds. The new building will contain shops on the ground floor, offices above, five electric lifts, and a large restaurant. The work will entail the demolition of some of the oldest property in Manchester. We understand that the treatment of the angle towers has not yet been finally settled. The tender of Messrs. Redpath Brown & Co., Ltd., of Trafford Park, for steel work has been accepted.

Vernon Park Library, Basford, Nottingham.

This is one of several branch libraries erected by the Corporation of Nottingham. A generous contribution towards the cost has been made by the Miners' Welfare Committee. The reading room is 54 ft. long by 22 ft. wide, divided by a glass screen into two sections; the first is a news room and the second a magazine and general reference room, with special provision for ladies. The lending library is 36 ft. by 24 ft., and faces the entrance. The library has been planned on the open-access system. A reading room, 22 ft. by 22 ft., for boys and girls is another feature. An attendant's office is placed so that there may be supervision over every part of the building. Each room will have plenty of light and ventilation, and heating will be by a low-pressure hot-water system. The public rooms will be laid with wood-block paving. The exterior will have brick facings with stone dressings. The general contractors are Messrs. F. Evans & Son, Bullwell, and the sub-contractors are as follows:—Stonemasons, Messrs. Jackson Bros., Bullwell; plumbing, Messrs. Humphrey & Co.; slater, Mr. T. Stephens; plasterer, Mr. H. G. Foster; iron-founders and smiths, Messrs. Lewis & Grundy. The architects are Messrs. Ernest R. Sutton, F.R.I.B.A., and Cecil A. L. Sutton, A.R.I.B.A., of Nottingham.

Cottage at Cloughton.

This small cottage is built on the high land between Scarborough and Ravenscar, and faces the North Sea. The work was carried out by local men, using local materials and methods of construction. Mr. Hubert Lidbetter, A.R.I.B.A., was the architect.

New Buildings in Victoria-street, Bristol.

These premises, which have been erected for Messrs. Wilkinson & Riddell, a firm of Manchester warehousemen, of Bristol and Birmingham, consist of basement, ground, and four upper stories, having a total floor area of 1¼ acres. The exterior walls are of brickwork, with floors, beams and piers of reinforced concrete, the front being faced with Bath stone, the windows of which have gun-metal frames. Offices and counting house are provided on the first floor, and staff dining rooms, kitchen, etc., are on the third floor. A hauling way and loading dock at the side have access from the street and are closed by wrought-iron gates. Four electric goods lifts serve the various floors, and there is an automatic control passenger lift in addition. A chute from top to bottom of the building facilitates the handling of goods. The general contractor was Mr. Frank Wilkins, of Bristol, and the sub-contractors were as follows:—Bath stone, The Bath and Portland Stone Firms, Ltd.; facing bricks, T. Lawrence & Sons, Bracknell; heating, J. Crispen & Sons, Bristol; plumbing and sanitary work, A. S. Scull & Son, Bristol; bronze windows, Crittall, Ltd., Braintree; steel windows, The Brunswick Engineering Co., Bristol; reinforced piers and floors, The Trussed Concrete Steel Co., London; electric and hydraulic lifts, Smith, Major & Stevens, Nottingham; electric lighting, etc., Buchanan & Curwen, London and Bristol; composition floors, The Bristol Marble and Mosaic Co., Bristol; rubber flooring, The India Rubber and Gutta Percha Co., Silvertown; stair treads, The Korkoid and Ruboleum Tile Co., Glasgow; fireproof doors and ironmongery, Gardiner, Sons & Co., Ltd., Bristol; asphalt, The Ragusa Asphalt Co., Ltd., London. The architect was Mr. W. H. Watkins, F.R.I.B.A., of Bristol.

New Premises, Bristol.

These premises, situated on the Tramway Centre, have been built for Messrs. Douglas Motors, Ltd., and comprise a spacious showroom on the ground floor, with suites of offices on the upper floors. The elevation is in Bath stone, with a mahogany shop front. The floors throughout, together with the roof, are of concrete reinforced with expanded metal. The general contractor was Mr. F. Wilkins, of Bristol, and the following were sub-contractors:—Steelwork and ornamental ironwork, Gardiner, Sons & Co., Bristol; shop front, G. Parnall & Co., Bristol; asphalt, Western Trinidad Asphalte Co. The architect was Mr. W. H. Watkins, F.R.I.B.A., of Bristol.

Branch Library Competition, Gabalfa, Cardiff.

The design by Mr. Sidney Williams, L.R.I.B.A., of Cardiff, was placed first by the assessor, Mr. Sidney K. Greenslade, in this recent competition, the full awards of which are given on page 308. In the design attention has been given to (*a*) the provision of ample space in the borrowers' hall; (*b*) to position of the public spaces and easy supervision from the administrative blocks; (*c*) to good natural light, there being windows on three sides of all public rooms and clerestory lights under the back of the main roof; (*d*) to ease of access to and egress from all parts of the building; (*e*) to economy in design, the materials being brick with a minimum of Portland stone dressing, chiefly devoted to the central feature. The front portion of the building has a slate roof, and there is a flat roof over the back wing. The floors are to be of terrazzo and floor boards covered with cork carpet.

The second premium was awarded to Mr. Harry Teather, F.R.I.B.A., also of Cardiff. In this design the whole of the building is capable of being readily supervised and easily controlled with a minimum staff. All parts are well lighted, the reading rooms being lighted on three sides, the borrowers' hall on two ends, and the charging desk top lighted. The lending library, in addition to windows on the north-west, is lighted on the south-east by a long dormer window. The basement is placed at the north-east end of the building, being the lowest part of the site, so that it is partly above ground, and thus obtains good direct light with a window opposite the boiler. All public rooms are easily and directly entered from the hall, and the charging desk is directly facing the entrance. The external brick walls would be 16 in. hollow, faced with 2⅝ in. thick rustic sand-faced bricks with Portland or Bath stone dressings, the roofs slated with small Penrhyn red slates; the window frames would be of steel, front doors of oak, and all internal joinery of pine, dark stained and varnished egg-shell finish.

Memorial to the Missing, Lille.

This design is for a circular building about 30 ft. high and 80 ft. across, open in the centre to the sky. A few steps lead up to the building, and in the middle of the grass plot inside is a symbolical figure. The names of the dead will be carved on the walls inside. Mr. H. Chalton Bradshaw, the architect, was awarded first place in the recent competition, the full awards of which are given on page 308.

The Kensington Cinema: A Correction.

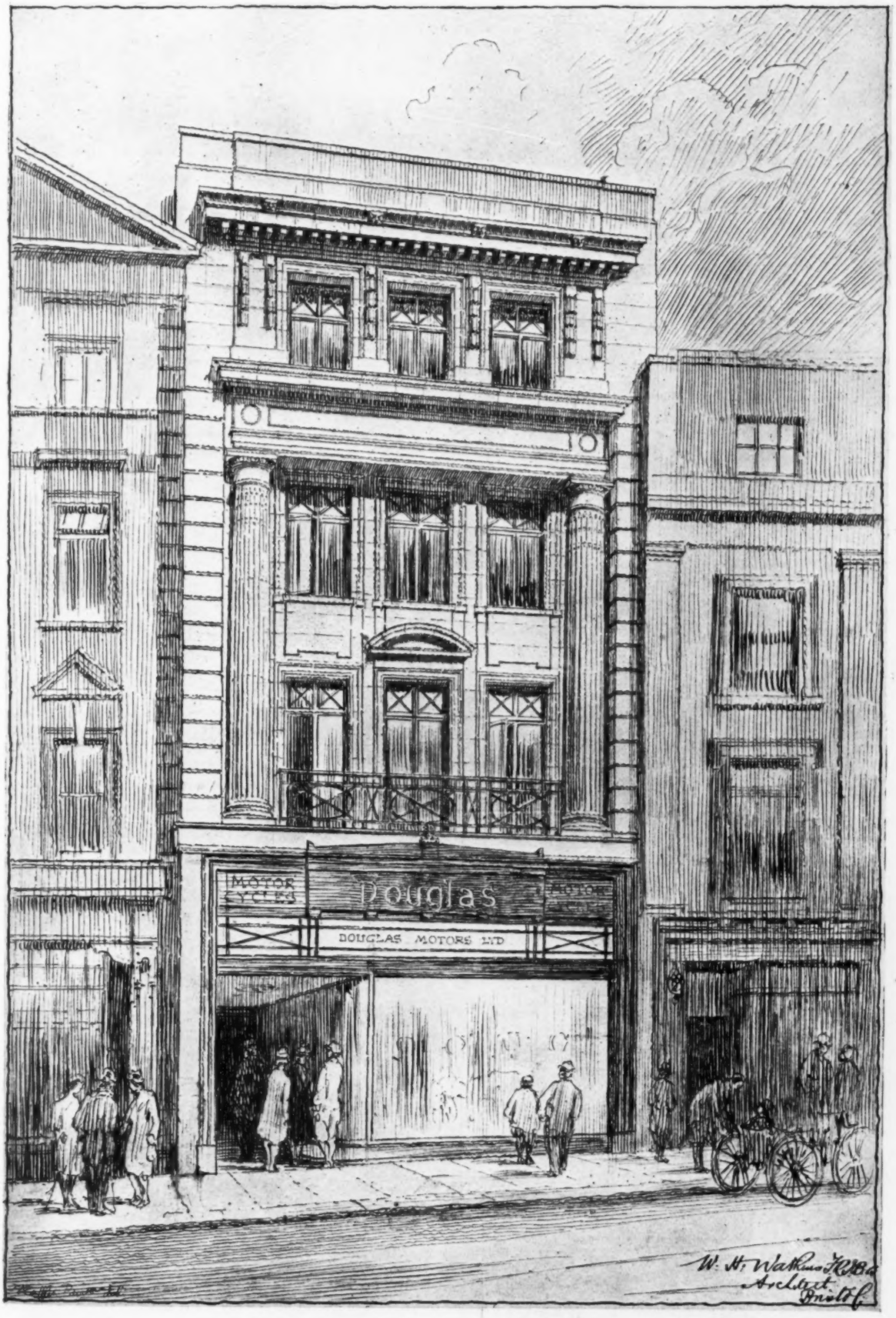
In our review of this building, contained on page 112 of our issue dated January 15, the external cast stonework was by an error described as being Atlas White Cast Stone. Actually the stonework in question is Patent Impervious All-Granite Stone (Portland tint), and was manufactured, erected, and fixed complete by the Patent Impervious Stone and Construction Company, Limited, of Rutland Works, 97, Lea Bridge-road, London, E.10, to whom all inquiries for similar stonework should be addressed. The illustrated advertisement on page xlix of our issue of January 15 contained a similar mis-description, and a correction of this advertisement is printed on page lix of this issue.

ECONOMIES FOR HOSPITALS AND ASYLUMS

In a paper read before the Institution of Heating and Ventilating Engineers, on February 10, by Mr. H. G. Cathcart, entitled "Engineering Services in Hospitals and Asylums," the keeping of careful records, both of fuel and water consumed, and of different stokers' performances on different shifts, was advocated. In addition to these records, the author also recommended the carrying out of monthly boiler tests, such tests varying in duration from 12 to 24 hours. The author proceeded to show some charts of different types of hospitals, asylums, and sanatoria, giving figures as to the actual amount of fuel and water consumed per annum. The saving in fuel in those institutions equipped with a modern centralised plant, as compared with those having the old-fashioned type of scattered heating and hot-water units, was pointed out. As regards the actual heating apparatus, the author advocated the use of low-pressure hot water, and as simple a plant as possible consistent with efficiency. He emphasised the necessity of accessibility of all pipes and radiators for cleaning purposes and the even distribution of heating surface. It was advisable not to have any control valves within reach of patients, especially convalescent juveniles.

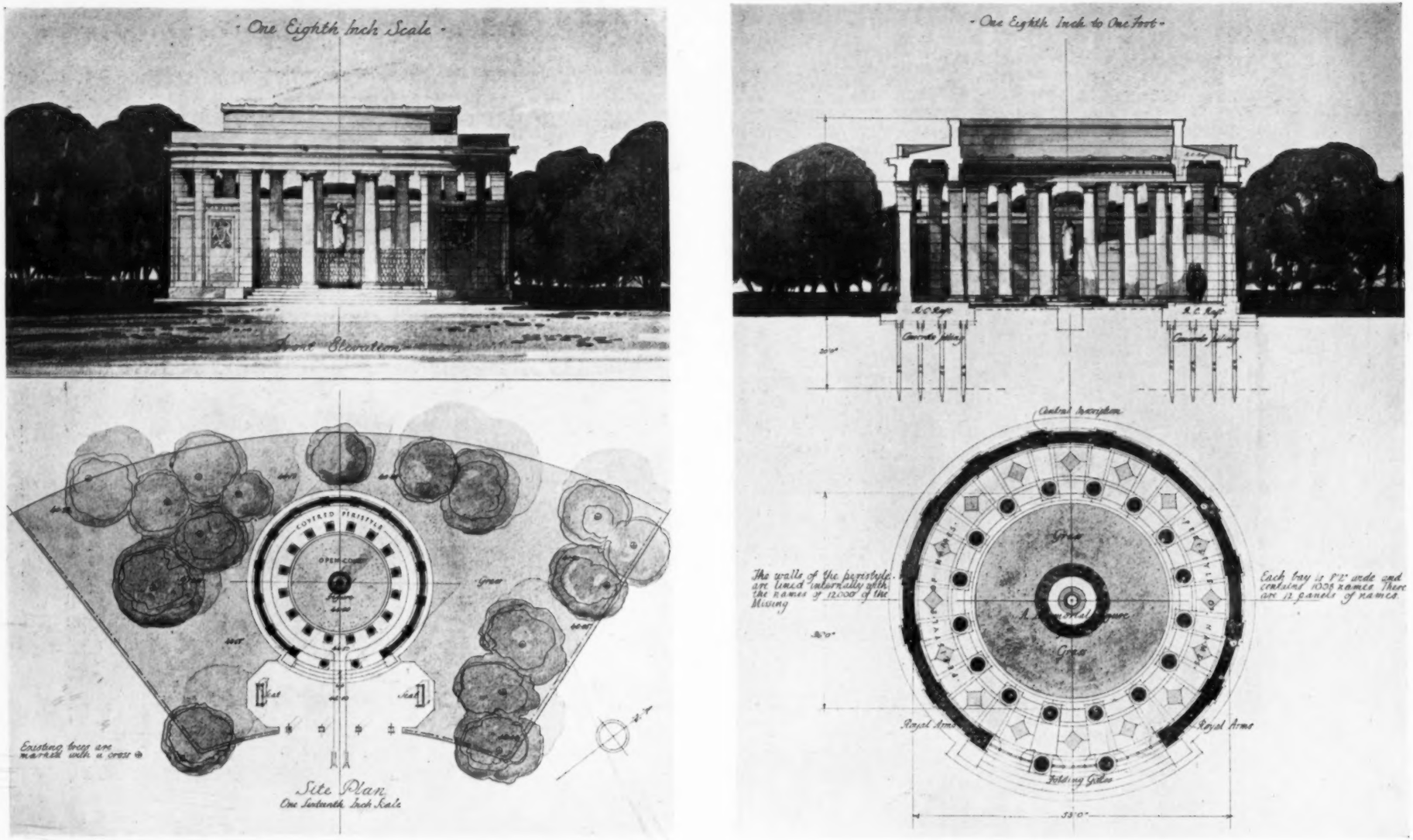
National Housing and Town-Planning Council.

Mr. John G. Martin, at present Organising Secretary of the United Kingdom Alliance, has been appointed Secretary of the National Housing and Town-Planning Council, in place of Mr. H. R. Aldridge, who recently resigned. In view of the contemplated new housing legislation, the series of conferences of local authorities which the Council is arranging to hold as hitherto at important centres will have a special interest.



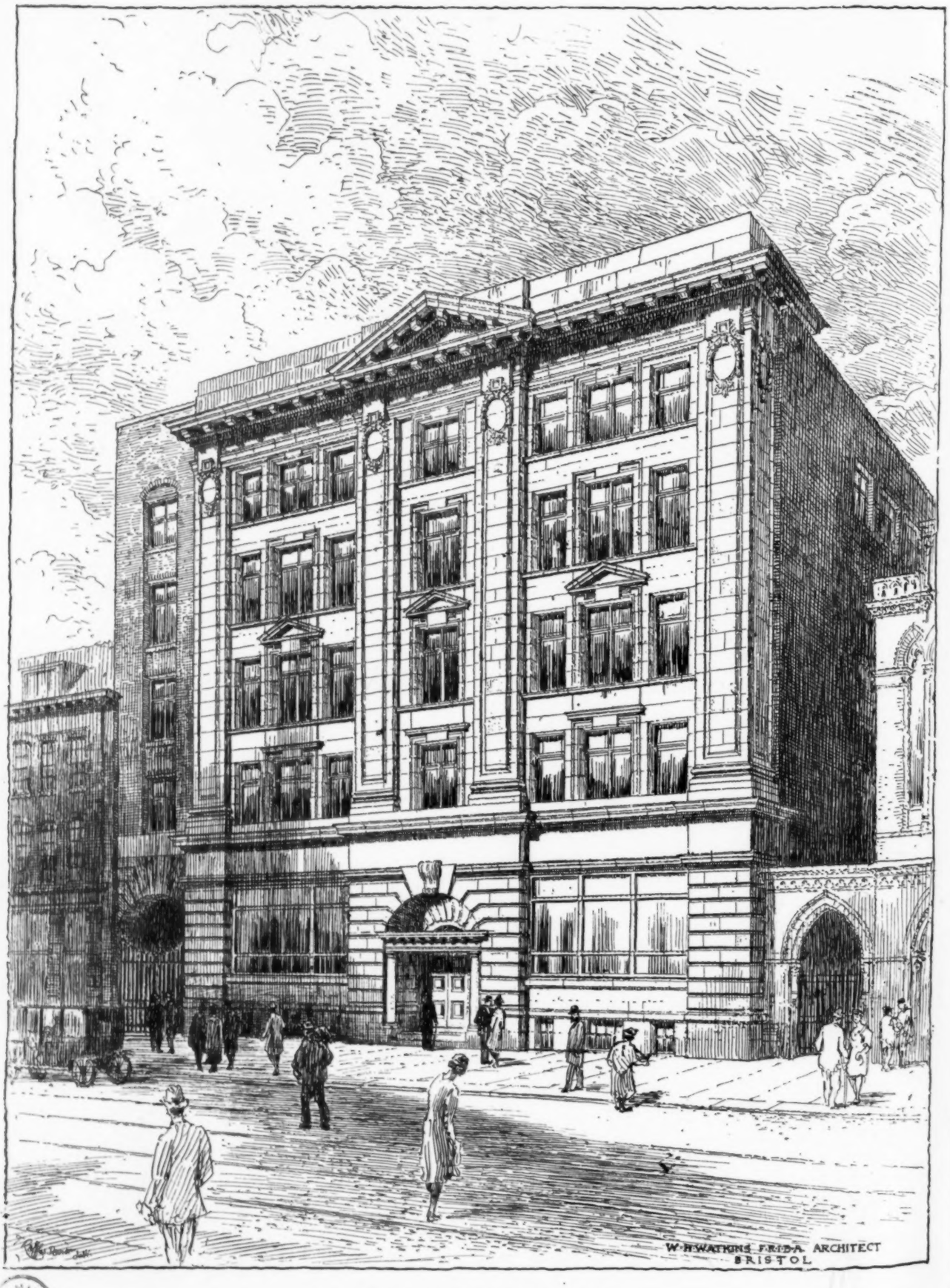
New Premises, Tramway Centre, Bristol.

MR. W. H. WATKINS, F.R.I.B.A., Architect.


One Eighth Inch Scale
Front Elevation
One Eighth Inch to One Foot
R.C. Roof
Concrete Ceiling
Central Inscription
Grass
The walls of the peristyle are lined internally with the names of 12,000 of the Missing
Each bay is 8'2" wide and contains 1008 names There are 12 panels of names.
Royal Arms
Royal Arms
Folding Gates
53'0"
Site Plan
One Sixteenth Inch Scale
Existing trees are marked with a cross

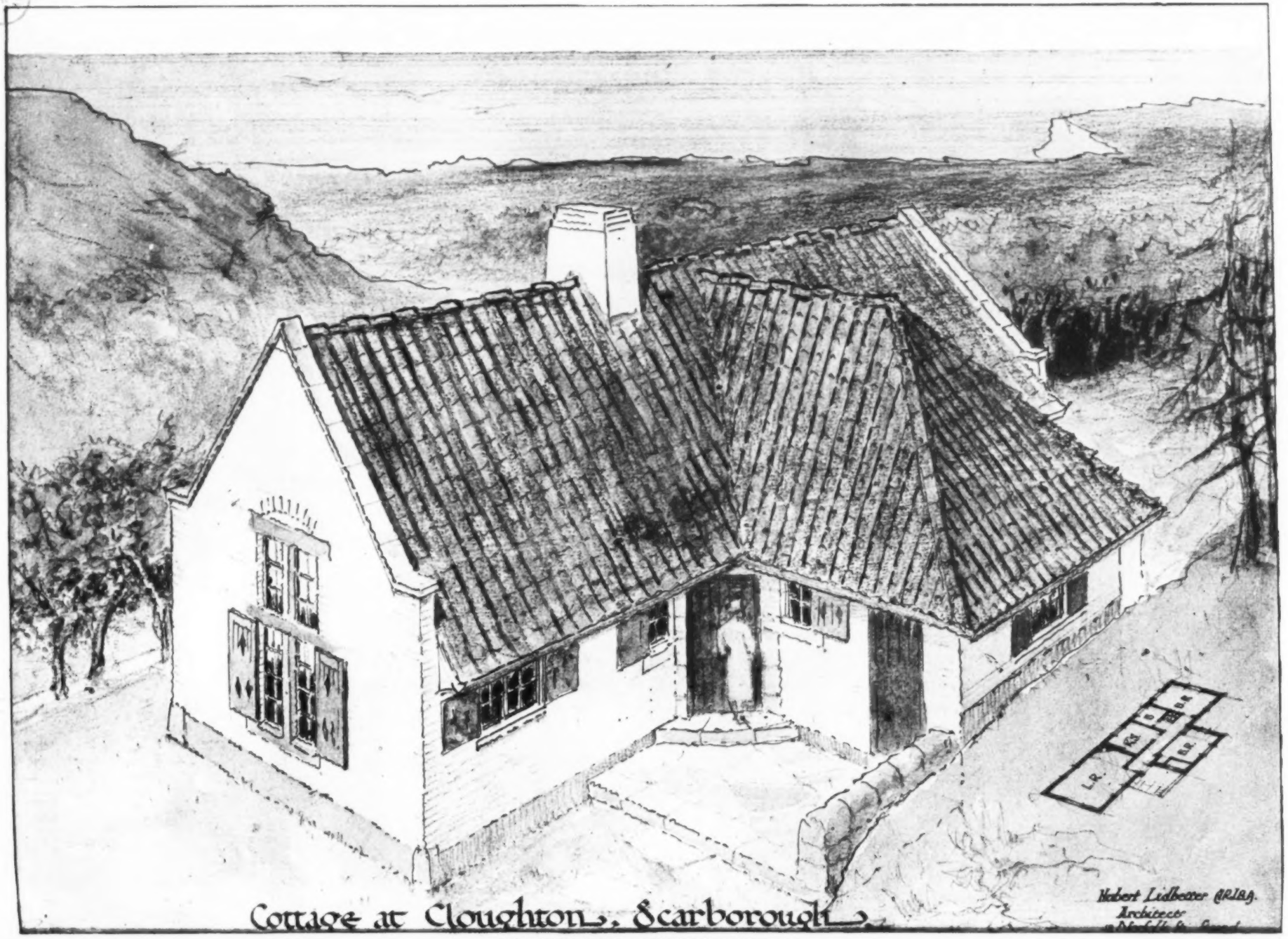
Competition for Memorial to the Missing, Lille: First Premiated Design.

MR. H. CHALTON BRADSHAW, A.R.I.B.A., Architect.



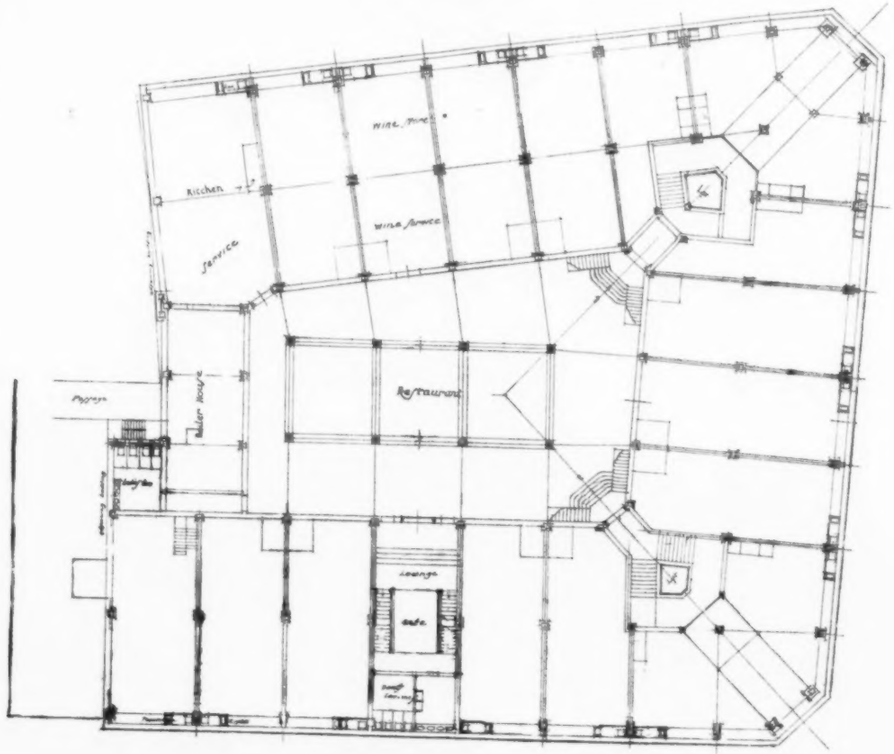
New Premises, Victoria-street, Bristol.

Mr. W. H. Watkins, F.R.I.B.A., Architect.

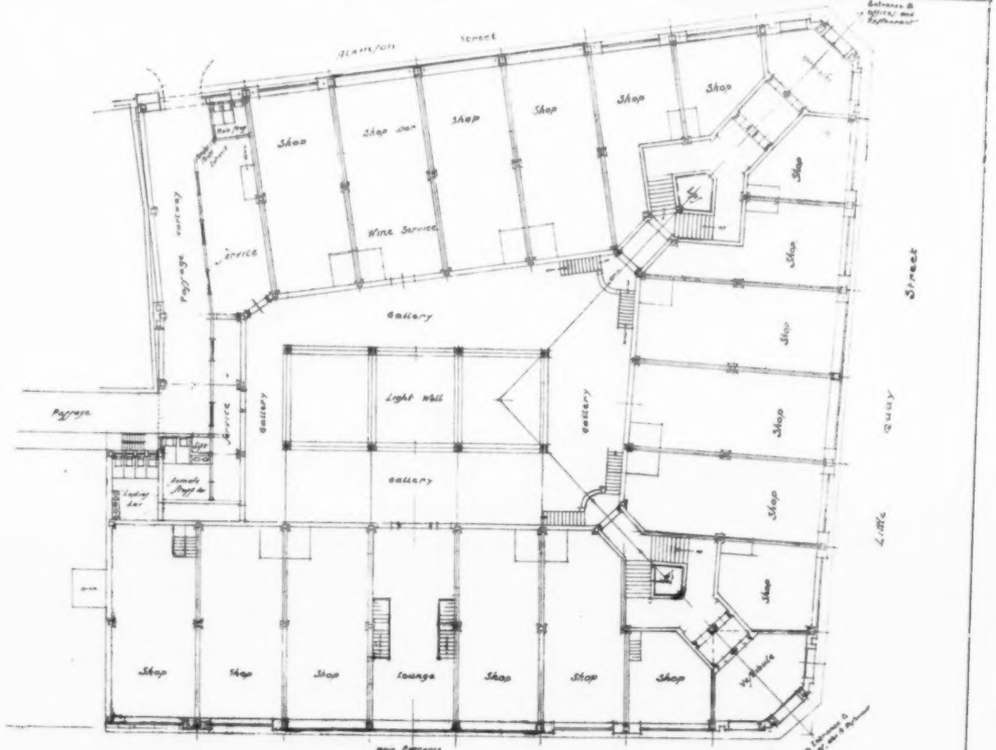


MR. HUBERT LIDBETTER, A.R.I.B.A., ARCHITECT.

MR. HUBERT LIDBETTER, A.R.I.B.A., ARCHITECT.



BASEMENT FLOOR PLAN

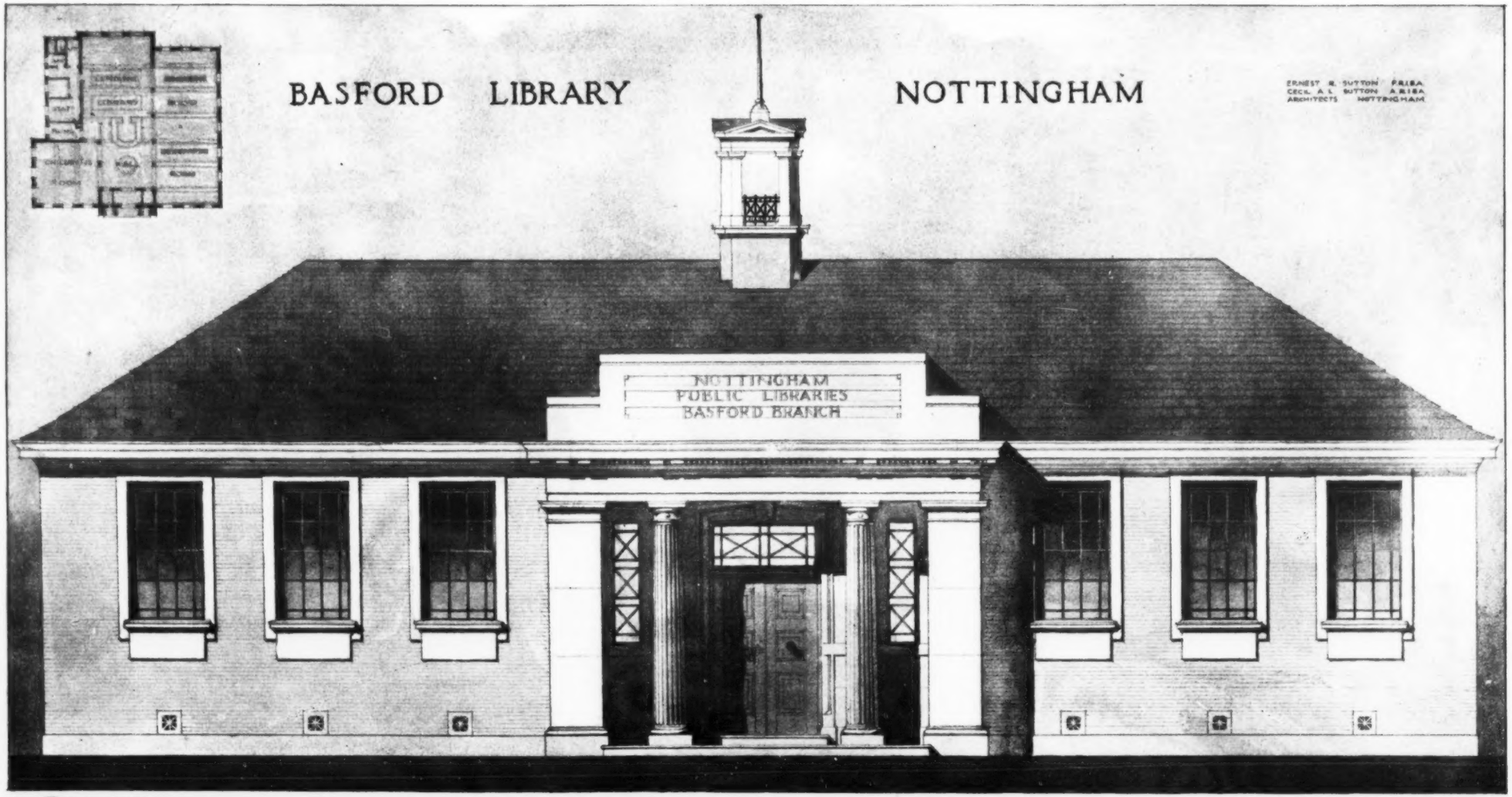


Ground Floor Plan.

Quay Street

"SUNLIGHT BUILDING." MANCHESTER. MR. JOSEPH SUNLIGHT, ARCHITECT.

UNIV. OF MICH.

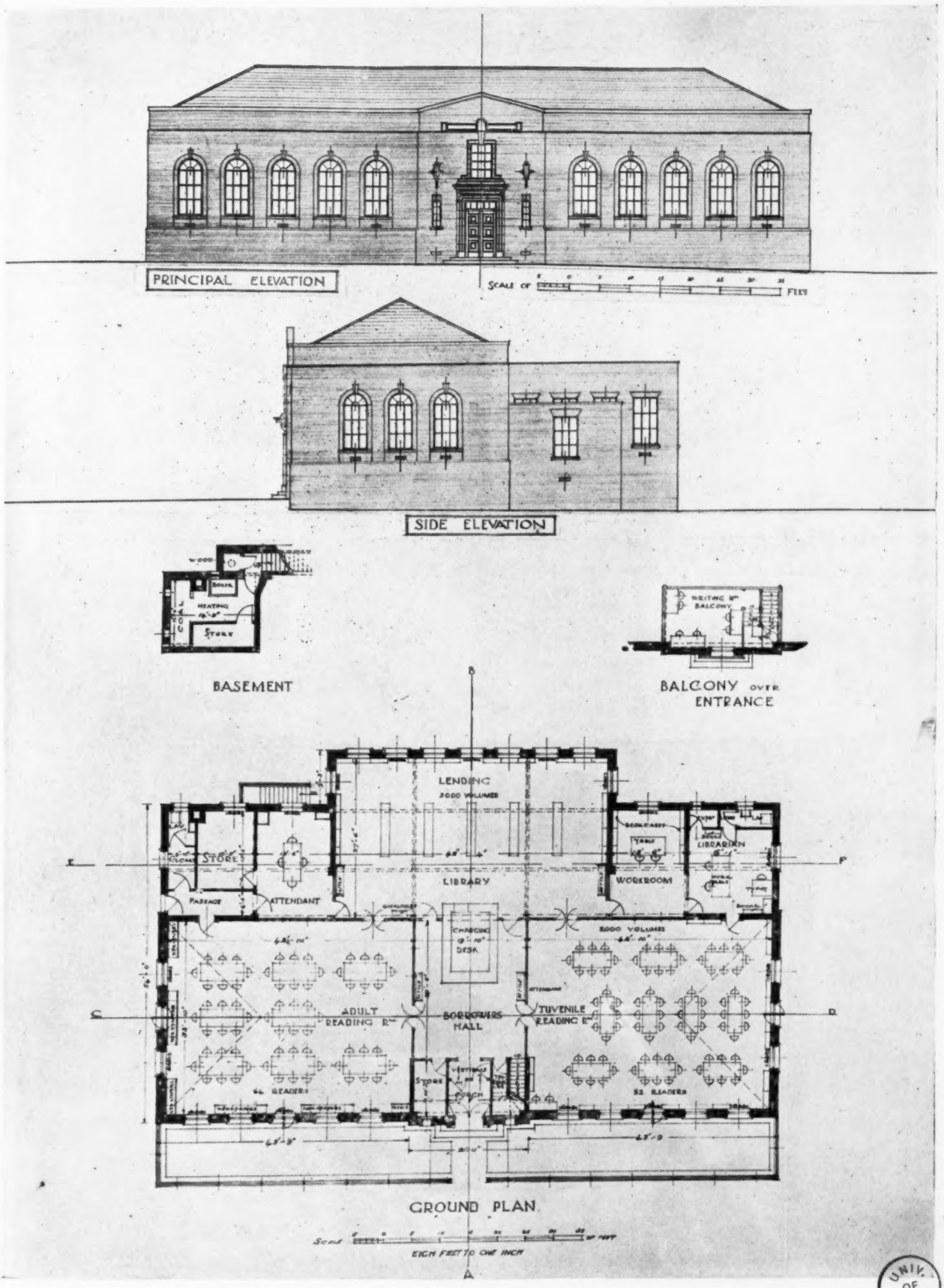


R.A. EXHIBITION, 1925.

UNIV. OF MICH.

NOTTINGHAM PUBLIC LIBRARIES, BASFORD BRANCH.

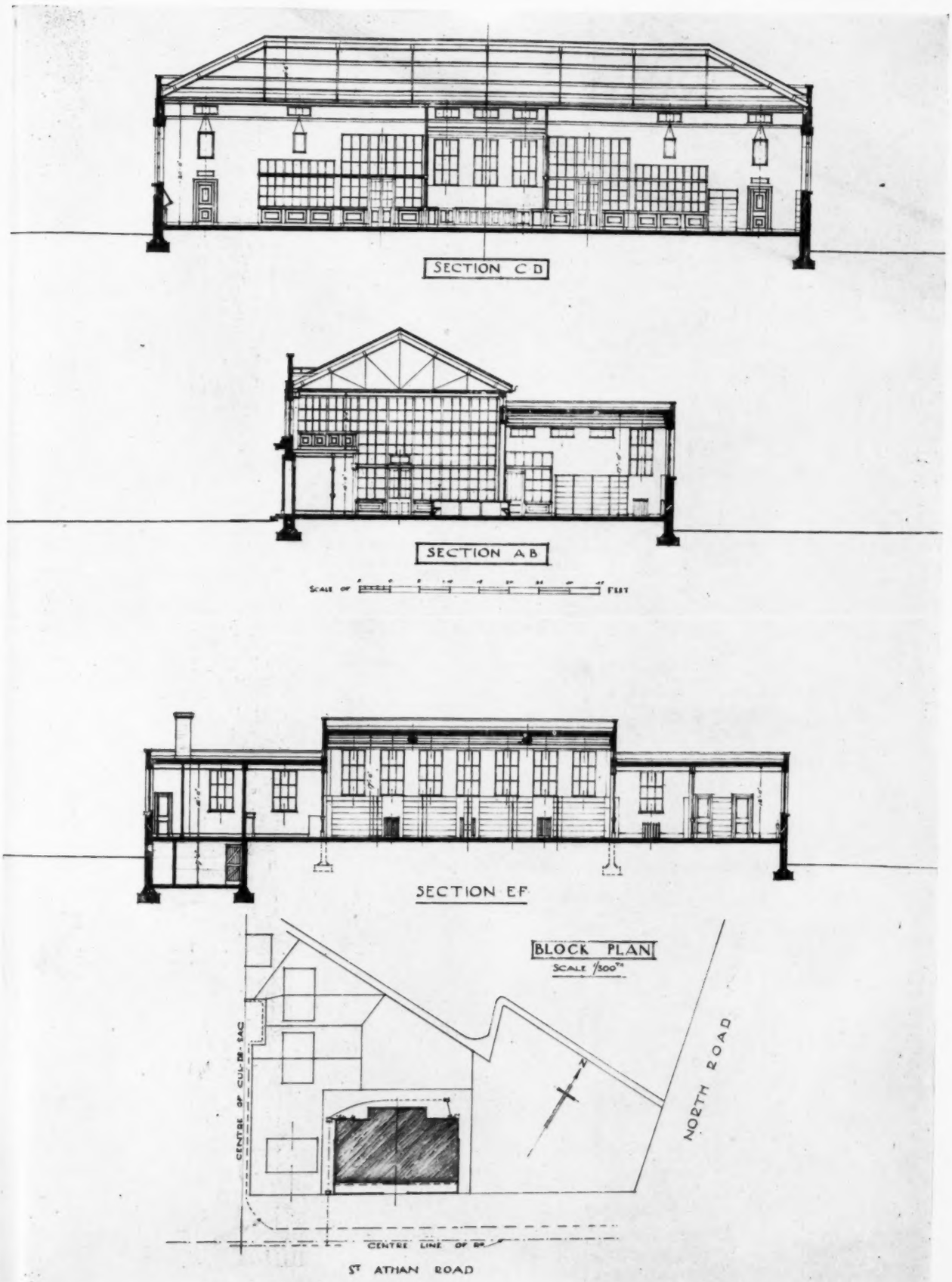
MESSRS. ERNEST R. SUTTON, F.R.I.B.A., & CECIL A. L. SUTTON, A.R.I.B.A., ARCHITECTS.



Branch Library Competition, Gabalfa, Cardiff: First Premiated Design.

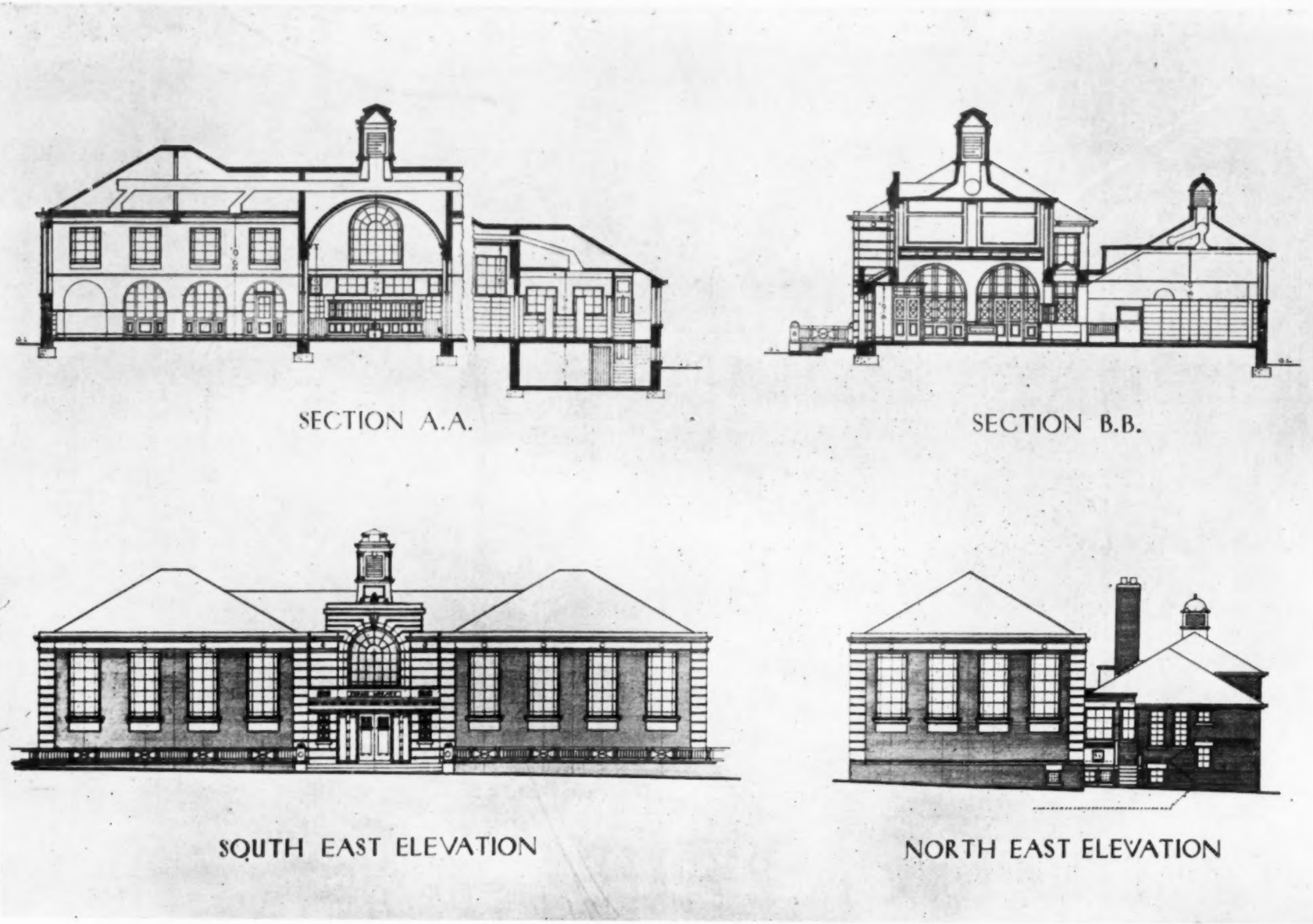
MR. SIDNEY WILLIAMS, L.R.I.B.A., Architect.

UNIV. OF MICH.



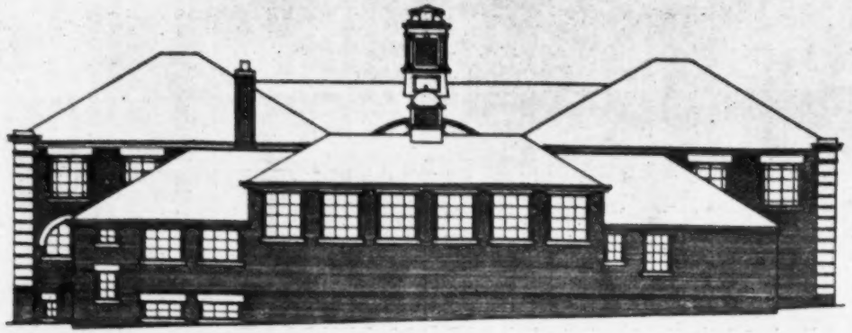
Branch Library Competition, Gabalfa, Cardiff: First Premiated Design.

MR. SIDNEY WILLIAMS, L.R.I.B.A., Architect.

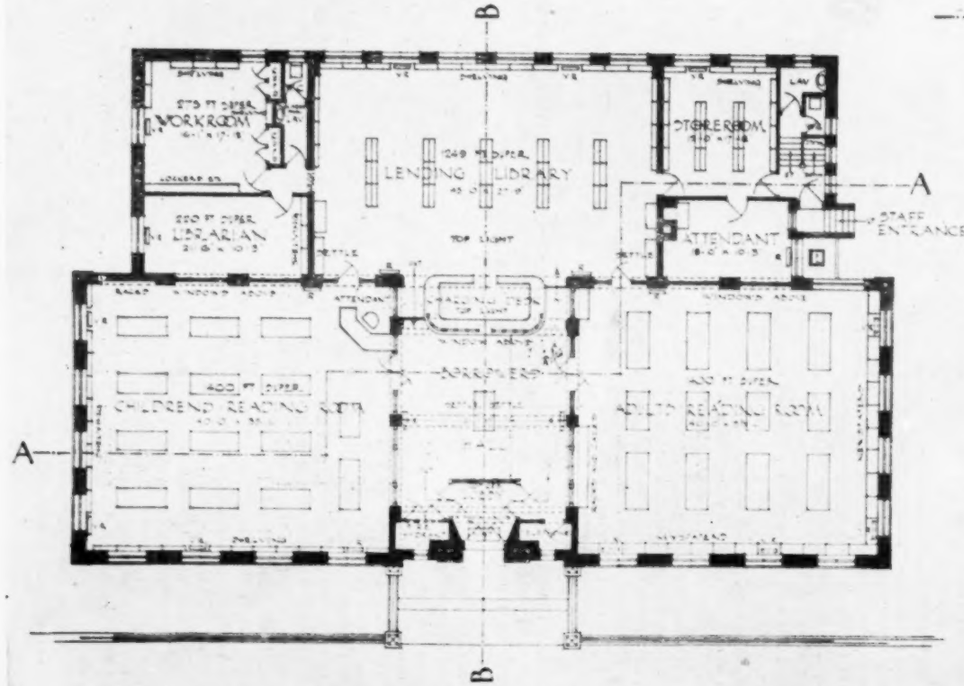


Branch Library Competition, Gabalfa, Cardiff: Second Premiated Design.

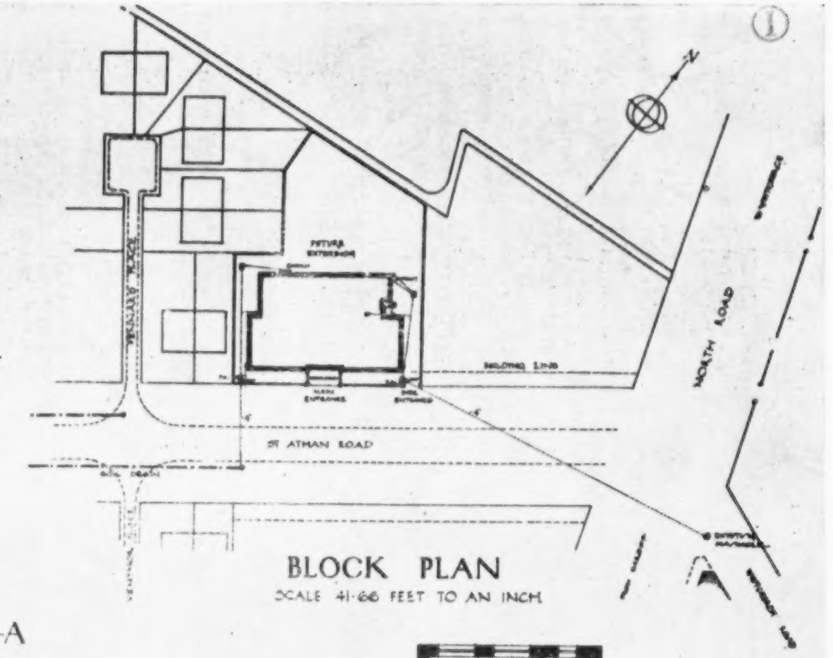
MR. HARRY TEATHER, F.R.I.B.A., Architect.



NORTH WEST ELEVATION

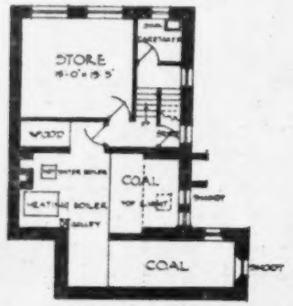


GROUND FLOOR PLAN



BLOCK PLAN

SCALE 41·66 FEET TO AN INCH



BASEMENT PLAN

SCALE EIGHT FEET TO ONE INCH

Branch Library Competition, Gabalfa, Cardiff : Second Premiated Design.

Mr. Harry Teather, F.R.I.B.A., Architect.

ARCHITECTURE FROM THE STRUCTURAL POINT OF VIEW

IN the course of a lecture on this subject, given recently before the Institute of Technology, Manchester, Professor A. E. Richardson, F.S.A., F.R.I.B.A., said that from the standpoint of construction, building had been steadily improving for the past century, but it had just as steadily been losing gracious expression. We knew that a strong line of demarcation existed between mere building and architecture. The conventions of the eighteenth century encouraged a rigid adherence to classic form, which latter to some extent was complementary to traditional methods of construction; the nineteenth century, on the other hand, encouraged an eclectic taste, which aimed at the picturesque. We had also to consider the industrial revolution of the nineteenth century, the discovery of the properties of steel, and the gradual development of skeleton construction veneered with stone and brick.

At the present time we were still under the spell of obsolescent methods. On the constructional side we were hampered by curious by-laws, and on the æsthetic side by an innate sluggishness which fettered us to consideration of periods, styles, and reproductions. Architects as a body were not wholly to blame for the present position of the arts and crafts. There had been sufficient excuse in professional circles for the energy that had led in turn to the study and analysis of first one phase of the antique and then another. To be brief, we had been forced by the eclecticism of nineteenth-century thought to view past art as providing an almost inexhaustible store of motives and models from which to retrieve both details and ideas.

Two factors were essential to a successful departure from the inanities of to-day; one was the need for the economical development of materials, and the other the recognition of the three-dimensional theory in design. The first factor embraced known materials and the possibilities of reconstructed materials, such as concrete; the second aimed at a stricter regard for structure.

The theory of evolution, in its eclectic and universal sense, in itself was a structural idea, in other words, it was a natural law. The difference between the requisite and the ornamental also must be understood in all its variations. In like manner the distinction that existed between fine building or architecture, and mere building, or crudity, must be appreciated. Architectural art, which in part had a scientific basis, if it was to flourish must be intellectually true or it would decompose and die. Architectural philosophy on this showing might be defined as the unification of the Known—that was to say, of all the laws contributed by history, and by experiment, on the part of individual artists and scientists.

Historic art, on investigation, would be found to have a certain sequence and homogeneity exactly reflecting the tendencies of the various periods of which it was the literature. As the centuries progressed towards our own time, art became more heterogeneous, and in the nineteenth century it became unstable and personal. Art which was specialised and individualistic might be truthful of the tendencies of an age, but it was unimportant in a relative sense when the establishment of complete congruity was an ideal. If attention was focussed upon the nineteenth century in England, it would be seen that a process of close study, a gradual building up of a repertoire of ideas, so to speak, based upon precedent, relegated the very essentials of building to a secondary place. In a small and populous island netted with ways of communication, the gradual suppression of local handicrafts and traditional methods was sure. We, as individuals, might regret the changes, but we had to look the new conditions in the face. It was useless to attempt to reimpose antique methods of art upon industrial expansion predetermined by questions of economy.

The study of the axes of a projected building was the first move in the correlation of construction to design. Here we were on definite ground. The architect must be a mathematician with a full knowledge of geometry; he must have the power to comprehend the purpose of the building he was designing as well as the psychology of the people for whom it was intended. That power could be developed by intensive training. Scheme after scheme must be prepared during a student's career to familiarise him with plan formations, for in this inhered the matured architect's power over the engineer or the sleight of hand of the mere decorator. For want of such training the engineer designed from what was called the practical standpoint, and his works more often than not were deficient in sequence and congruity, the difference being crudity of expression in the generality of engineering works and the absence of the persuasive quality of grace.

The nucleus of the plan, the arrangement of the spaces about the axial lines, the reduction of the axes which were unnecessary should therefore represent the aim of every designer. The principle of a sound plan constituted the very fibres of sound structure, and from thence could be deduced the true relationship of construction and design. This process was in accord with natural laws; it could be observed in the structure of organism and plants; it was present in the structure of the intellect and the body.

The next move was to determine the principal structural points which would express the plan in three dimensions, and at this stage the type of construction which was both economical and purposeful had to be considered. On such a showing it would be seen that construction, or the scientific assembling of materials, was subordinate to the structural idea of efficiency, congruity, beauty and completeness. If the building was to be entirely of reinforced concrete, the points of support would be comparatively slight, the walling in sympathy, and the junctioning of the parts expressive of the nature of the material employed, irrespective of veneers of marble, woodwork and plaster.

Such a line of thought enabled an architect to differentiate between mere construction and the embodiment of three-dimensioned structure. If the building was to be constructed of steel with internal and external faces of brick or stone, the effect would be to increase the perspective qualities, but the principles of structure remained constant from the time the idea was resolved in plan form. Perhaps it was that much of the present indecision amongst architects on matters of design arose from the difficulties of reconciling two types of construction in one building. But in architecture, like aviation, under present conditions there must be compromise. In other words, the choice of the lesser of two evils. The next move was to plot the walling, that was to say, to allot to the enclosures and spaces, as well as to give the principal points of support, the requisite thickness determined by the height of the structure. In the early stages of a design this was done by eye, for it was as well at this point to leave affairs rather free. A mind attuned to logical development never lost sight of the preliminary moves or of the structural weaving of the plan both horizontally and vertically.

We now arrived at a point when the building existed in embryo on paper; it was projected in three dimensions. In the mind of the trained architect, from the outset, there had existed some transitory and indefinite idea of the ultimate character of the building. This could be termed the pictorial concept. So the design proceeded to the next stage. No longer was it abstract or viewed as a castle in the air. The process of making the indefinite and unknowable a thing of tangibility was being brought to a logical conclusion. Here, again, the trained mind had an enormous advantage over the indisciplined. There was the vast picture of the buildings of the past to give confidence; there were the masterpieces of other days to serve as symbols for guidance and discretion. It did not follow that we were to copy, but our designs would be all the better if we referred to the outstanding qualities of all times to ascertain in what porticular our own design fell short of the ideal.

From this point a most exhaustive analysis of the work began. The accommodation had to be checked; the proportion of voids to solids in every part of the fabric adjusted; and calculations made as to the strength of the components. Then was sought the advice of specialists in heating, hygiene and acoustics. In works of moderate size the architect was competent to make his own calculations, but for buildings of the first rank it was the practice of the architect to confer with the engineer or the specialist. Contrary to the general theory, it was not possible to enlist the aid of the engineer in the earliest stages of a design. The architect alone must determine the essentials of the structure, and it was safe to say that a building with a good plan was invariably buildable. In other words, illogical construction was inadmissible with sound structure, which, to the architectural way of reasoning, was the plan. After all, construction was merely the interpretation of the structural theory in three dimensions; congruous and artistic expression was the resultant of many minor factors. On this showing design was made up of attributes which must remain in a nebulous state until called into activity by the structural entity of a building. Proportion, rhythm, decoration and character were ancillary to the main theme, but these attributes undoubtedly played a part in the component result. Building, therefore, was a scientific art calling for many minds in its execution; but nevertheless it demanded from the outset the omniscience of one mind; that of the architect or chief builder. Hence it had been proved time and again that amidst a host of practicalities the architect has proved himself not only an artist but an eminent technician.

It was a little old fashioned to indulge in aphorism, but there was no other way of stressing the points regarding vital building. The first rule, therefore, to be observed by the architect of to-day who wished to be in the movement for reform, could be summarised as follows:—

Pay close attention to cause if you would have telling effect. The conditions which demanded the erection of a building for a specific purpose were the chief items in a problem which was best solved by a mind trained to deal with logical arrangement. Experience had shown that spaces of different size and shape could be disposed in sequence. The dominant axes of these spaces or enclosures, which could be only determined by trial, gave the nucleus of the structural idea; in other words, the way architects could best contribute to the scientific art of their day was by determining on the production of efficient plans in which the high intellectual ideal of honesty of purpose was paramount.

Empire Forestry Journal.

The Empire Forestry Association, of the Imperial Institute, South Kensington, S.W.7, has sent us a copy of the 1925 Journal, edited by Mr. Fraser Story, price 4s. We see that the Forestry Commissioners propose to plant 22,600 acres in 1926, as compared with 18,400 acres afforested in 1925, and 13,800 acres in 1924. Among the more important articles is one on "The Forests of Papua and New Guinea," describing the results of the first forest survey of these little-known Australian territories; other contributions of outstanding merit are "The Value of an Arboretum," by the Assistant Director of Kew Gardens; "Forest Development in Burma" and "The Forests of Cyprus."

SPECIFICATIONS.—VI

By H. V. MILNES EMERSON, A.R.I.B.A.

SLATER.

Notes.—The ordinary slate used for building purposes is an argillaceous rock, compact and fine grained, which readily splits along planes called "planes of slaty cleavage," allowing masses to be split into thin sheets, with smooth surfaces that lie close together, making a light and impervious roof covering. The blocks are detached by blasting, split into suitable widths and thickness, the latter about 3 in., cut into suitable lengths with circular saws, split with the aid of thin chisels and then squared either by machinery or by hand.

The characteristics of good slates are hardness, toughness, colour, grain, and resistance to absorption. If a slate is soft it will absorb water, becomes friable, and, owing to the enlargement of the nail holes, will eventually become loose; whilst if a slate is brittle it will readily crack under pressure. A good slate should give out a sharp, metallic ring when struck, should be easily holed, should not splinter, nor be friable at its edges. The slate should not have a greasy feeling when handled.

The colours in slates most frequently met with are dark blue, purple, grey, bluish-black and green. Some slates are marked with bands and patches of different colour, and although not generally injurious, they somewhat spoil the appearance. The grain should be very fine, and a slate should not absorb water to any perceptible extent. Absorption can be ascertained by weighing a perfectly dry slate, placing it in water for 24 hours, draining it and weighing again, the difference in weight being the amount of absorption. The best quality Welsh slates split into even thickness sheets. Slates from some quarries will not split so fine or evenly, but they have been largely used owing to their artistic appearance.

Slates are marketed in standard sizes, the largest in general use being the Countess, which measures 20 in. by 10 in. The smaller varieties are the Viscountess, 18 in. by 10 in.; Ladies, 16 in. by 10 in. down to 14 in. by 7 in.; and Smalls, 12 in. by 8 in. down to 10 in. by 5 in. Large and small slates are often used on one roof, the courses being graduated in size.

The largest size of roofing slate is the Queen, which varies in size, but averages 36 in. by 24 in. This size of slate is not often used, but is to be found on some of London's older buildings. Slate is largely used for switchboards, &c.

Item

138. SLATES.—The slates to be (here state quality and size), samples to be submitted to the architect.

The slates to be whole, even in thickness, free from defects, laid to a 3 in. lap, each slate nailed with two 1½ in. galvanised nails (or 1½ in. copper nails, 6 lb. per 1,000) to 1½ in. by ¾ in. battens, with double courses to eaves and verges; form cement fillet beneath all verges and point to verges in cement mortar.

Provide and fix all necessary deal springing and tilting fillets, &c.

Notes.—Slates can be nailed direct to boarding or to battens spiked to the boarding, but in the latter case, if felting is used, the battens should be fixed to similar battens running from eaves to ridge, spaced 12 in. apart.

The general slope used for slated roofs is 30 deg., but large slates can be laid to 22 deg. pitch.

In exposed districts boarding should be used. This can be ⅞ in. or 1 in. rough boarding, with the edges shot. If battens only are used the underside can be torched in line and hair mortar against the battens. Old tiled roofs will often be found treated in this way in country districts.

Specify if the slating is to be in diminishing courses, and remember that small slates only can be used for circular work.

On roofs with ordinary pitch the lap should be 3 in., but on steep pitched roofs 2½ in. lap would be sufficient.

139. FELT.—Lay over surface of all boarded roofs under the battens best inodorous roofing felt (state weight or thickness or maker), properly lapped and nailed every 3 in. with galvanised clout nails.

Note.—Felt, in addition to boarding, will greatly increase the warmth of a house in winter and the coolness in summer.

140. HIP AND RIDGE ROLLS.—Put 2 in. diameter Bangor slate bird's-mouthed hip and ridge roll with 6 in. by ⅜ in. sawn slate wings in long lengths, bedded in oil putty. To be fixed with brass screws, countersunk at heads and stopped in with putty.

141. HIPS AND VALLEYS.—The hips and valleys to be close. Cut to mitre; wide slates to be used. Fix lead soakers provided by Plumber.

142. RIDGES.—Cover the ridges with 9 in. half-round brindled (or red) ridge tiles bedded and pointed in cement.

143. GENERAL.—Make good in all damage to slating and leave all roofs sound and watertight at completion. Clean out eaves, gutters and down pipes.

Notes.—Clay ridge tiles have largely taken the place of the slate rolls and wings.

Close mitred hips looked well, lead soakers preventing any water passing through the continuous hip joint. Valleys can be treated the same way; a secret lead gutter can be used instead of the soake.

Slate shelves can be formed of 1 in. sawn Bangor slate with sawn edges and butt joint bedded in cement on concrete or half-brick divisions. Small quantities can be specified under Bricklayer or Mason; otherwise the work should be specified under Slate Mason.

Asbestos Slating.

Asbestos slating is a mixture of asbestos, cement, and colouring material. The slates are made in slate pattern, diagonal, and in sheets, plain or corrugated. They are secured to boarding or battens in the ordinary way, the diagonal slates having the exposed point held down by a copper rivet, which, placed between the joint of the two slates underneath, is passed through a hole in the slate above and then turned down, thus forming a secure clip. Asbestos slates are light, and are largely used for factory work; and if required to last for a long period, should be obtained from a reputable firm who will guarantee the work. Specify the size of slate and method of fastening; the hips, ridges, gutters, &c., as specified for ordinary slating.

TILES.

Notes.—Roof tiles are made from clay similar to that employed for brick-making but stronger. It is weathered either by exposure to frost or sun allowed to mellow in pits, then cleared from stones, tempered, pugged and moulded, beaten when part dry with a wooden bat and burned in a domed kiln.

Roofing tiles are heavy, and require heavier roof timbers compared with slate roof; they absorb water and owing to their irregularities, do not fit together very closely. For this reason they should be laid to a steeper pitch than required for slates in order to prevent driving rain penetrating into the roof.

Tiles, like slates, are fixed to boards or battens. An economical method is to use feather-edge boarding of a width equal to the gauge with the thick edge nearer the ridge. This method forms a boarded roof and at the same time acts as battens to which the tiles can be hung by the nibs on the tiles and nailed every fourth or fifth course.

The most common form of tile used is the plain tile varying from 10 in. by 6 in. to 11 in. by 7 in. These can be obtained in a variety of colours, machine and hand-made, the latter resembling in colour and shape the old tiles met with in country districts. The gauge—*i.e.*, the amount of tile showing—is usually about 4 in., thus a tile 10½ in. long gives 2½ in. lap.

Pantiles are curved and about 14 in. by 9 in., with small cogs, and do not require nailing. They are laid to a 3 in. up to 5 in. lap, but owing to their shape do not require a double layer. In other words, a pantile 14 in. long with a 4 in. lap would have an exposed surface of 10 in. Pantiles, in addition to covering a larger area, are lighter in weight than plain tiles. They can be obtained with one, two or three rolls. If the roof is not boarded the underside of the tiles should be torched. Pantiles are used for cottages and outhouses, but seldom for better-class work.

Modern tiles now being used largely are the Marseilles and the Courtrai self-locking tiles. The tiles are quickly laid and do not require nailing.

Valley and hip tiles are made for plain tile roofing, but half-round hips and lead or zinc gutters have to be used in connection with the other froms of tiles mentioned.

Item.

144. TILING.—Cover the roofs with hand-made, hard-burnt, sand-faced tiles with nibs, to be of approved colours and make, even in thickness, and free from cracks and blemishes, laid to a 4 in. gauge on feather-edge boarding and nailed every fifth course with two galvanised or copper nails to each tile. Lay double course at eaves.

145. TILE AND HALF.—Put tile and half to all hips and vertical faces.

146. HIPS AND VALLEYS.—Finish the hips with hip tiles to course and bond with general tiling, each tile well tilted up at end to form saw-tooth and bedded and pointed in cement. Valleys to be swept and the courses to be carried around horizontal or to be formed with valley tiles made for that purpose.

Note.—If swept valleys are used (and they look very effective) they must be carried around horizontally and if the valley is between two roofs of different pitch then the gauge of the lesser roof must be altered in order that each course of tile will continue around the sweep horizontally with the courses of tiles on the main roof. To make a good job only experienced tiling firms should be employed.

147. RIDGES.—Cover the ridges with 12 in. half-round tiles bedded and pointed in cement.

Note.—It gives a better finish if the cement is coloured with one of the colouring preparations on the market.

148. SOAKERS.—Fix the lead soakers provided for in "Plumber."

149. GENERAL.—Make good all damage to tiling and leave all roofs sound and watertight at completion. Clean out eaves, gutters and down-pipes.

Alternative Items.

150. CHEEKS TO DORMERS.—Cover cheeks of dormers with feather-edge boarding and tiling similar to main roof.

151. IRON STAYS.—Put stay iron hooks to the end of hips and paint three oils.

152. MITRED HIPS AND VALLEYS.—The hips and valleys to be cut and mitred together and carefully dressed over the secret gutters.

153. VERGES.—Bed and point verges in cement.

Note.—The verge tiles can be tilted to give effect to the appearance of the roof.

154. VERTICAL TILING.—Cover the upper portion of walls of house, bays, &c., with vertical plain tiling with angle tiles (bedded and pointed in cement mortar if required), nailed to 2 in. by 1 in. fir battens plugged to wall. Put double course at foot tilted over the brick, timber, or stone band below.

155. PANTILING.—Cover the roof with pantiles laid to a 3 in. lap upon 1½ in. by 1 in. fir battens spiked to rafters, bedded, and pointed in hydraulic lime and hair mortar or cement mortar. Perform all necessary cutting and leave watertight at completion.

Note.—Specify hips, valleys, ridges, &c., as before.

Pitch for pantiles should not be less than 24 deg.

STONE TILER.

Stone tiling is not often used for roofing, although found on old buildings in the stone districts.

The pitch should be not less than 40 deg. The stonetiles should be laid to a 3½ in. lap in

diminished courses upon sawn oak laths or fir battens fixed with oak pegs. The hips, valleys, ridges, &c., can be in lead or in sawn stone, the latter being more in keeping. The stones should be bedded in mortar or rendered between the laths on the under side

SHINGLER.

Shingles can be in cedar, larch, oak, or stringy bark, the latter an Australian wood. The shingles are split to the required length and width, generally about 6 in. wide by 12 in. to 18 in. long, laid to a lap of 4 or 5 in. to a pitch not less than 45 deg. Ridges and hips can be formed with oak boards, lead, galvanised iron, or zinc capping, and the valleys in lead or zinc. The shingles are nailed direct to boarding with copper or composite nails.

156. SHINGLES.—Cover the roof with ¼ in. split oak shingles laid to a 4 in. lap with double eaves course and nailed to boarding with copper nails.

HIPS, RIDGES, &C.—These can be specified as required.

THE "BUILDER" CONSTRUCTIONAL PROBLEM COMPETITION

AWARD FOR PROBLEM 4

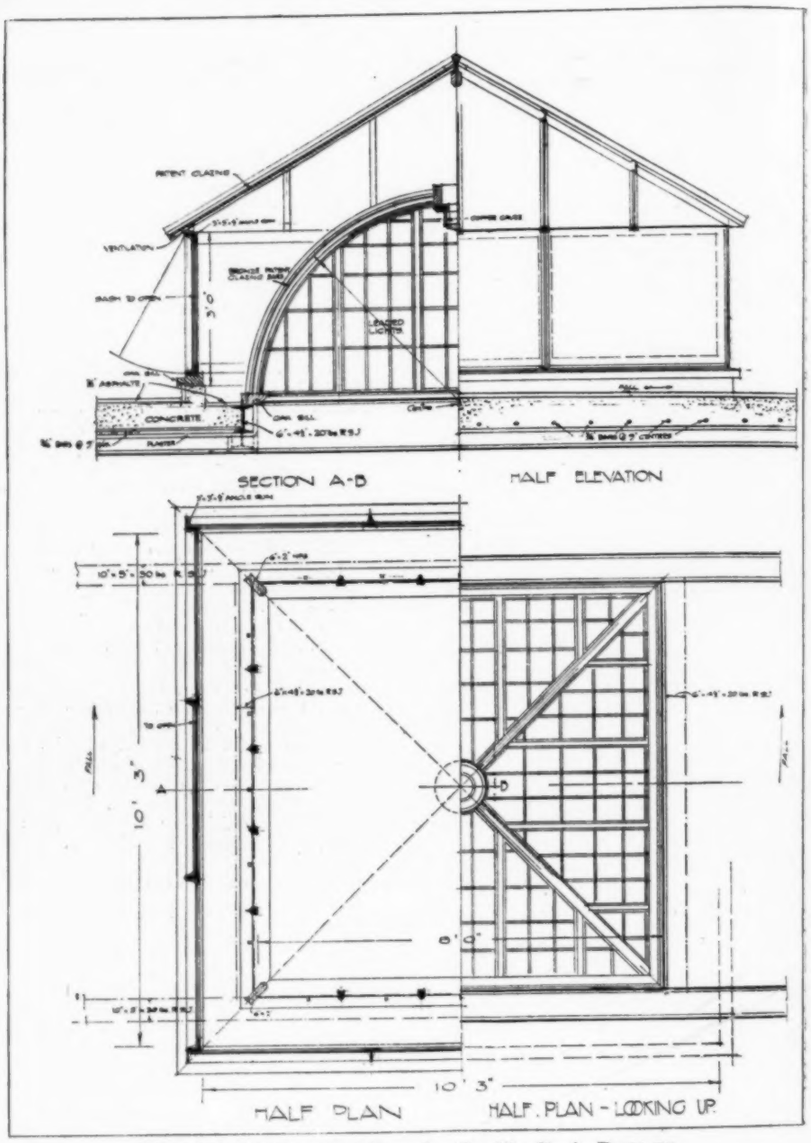
THE prize of £1 is awarded this week to Mr. R. A. Phillips, of Winton, Bournemouth, who submits a good and practical solution of the problem. The roof is covered with concrete and asphalt in the usual manner, and has a lantern light constructed in timber with patent glazing. The ceiling light is square on plan and domed in section, with bronze glazing bars and leaded lights. Provision has been made for ventilation and cleaning.

In his report the winner gives the following particulars of construction :—

The roof is of concrete, supported with two 10 in. by 5 in. by 30 lbs. R.S.J.'s running across the ceiling of staircase well, with two 6 in. by 4½ in. by 20 lbs. R.S.J.'s acting as trimming joists to the ceiling light. The concrete, 6 in. thick (minimum), reinforced with ¾ in. bars at 9 in. centres, and laid to falls as shown, with channel and outlet to rear, discharging into R.W. head in the area. The roof is covered with two layers of asphalt, finished ¾ in.

The lantern light measures 10 ft. 3 in. by 10 ft. 3 in. (internal dimensions), and is constructed with patent glazing to roof, and side framing of angle and tie irons, the whole of the lantern being glazed with Hartley's rough rolled plate. One sash of the side framing is made to open to enable the ceiling light to be cleaned.

The ceiling light is 8 ft. by 8 ft. (internal dimensions), being square on plan and domed in section. The patent glazing bars are of bronze and glazed with leaded lights in Cathedral glass. At the apex of the ceiling light is an oak ventilator to prevent condensation.



Winning Design, Problem 4. By MR. R. A. PHILLIPS.

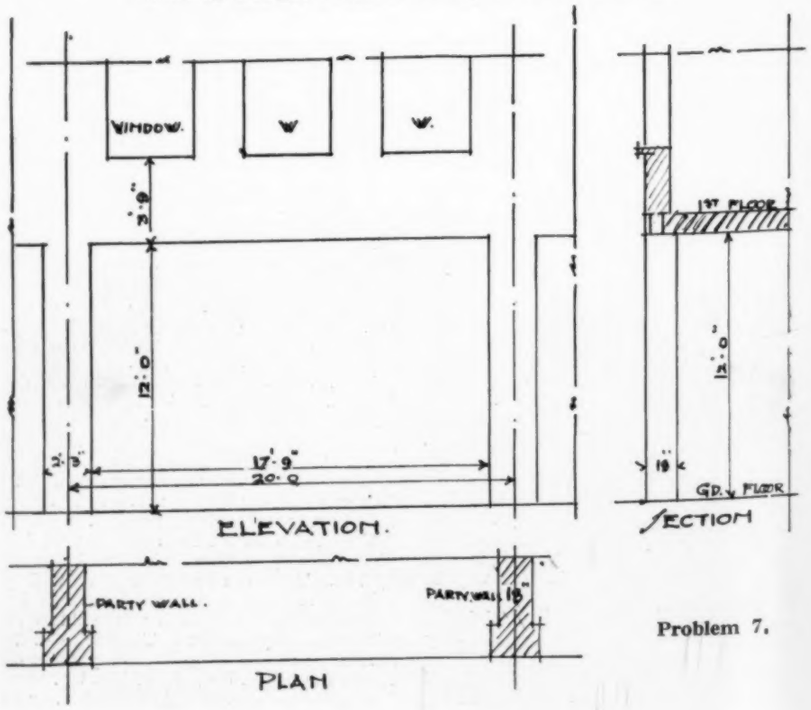
PROBLEM 7

In a main street new shops are being erected with a frontage of 20 ft. between the centres of party walls. The clear opening for the shop front is 17 ft. 9 in. by 12 ft. high.

Draw to a scale of 4 ft. to one inch a shop front in wood or metal, with pilasters, fascia and sun blind, and give details to a scale of 1½ in. to the foot.

Competitors should remember to print their lettering to a good size so as to allow for reduction.

Answers, addressed to the Editor, and marked "Problem 7," to be sent in not later than first post March 1. The Editor's decision to be final.



Problem 7.

REINFORCED CONCRETE IN BUILDING CONSTRUCTION

V.—FIRE RESISTANCE.

In the official report of the London Fire Brigade it is stated that during 1924 there were 3,845 fires within the County of London, resulting in 438 cases of personal injury, including the loss of 79 lives, and direct damage to the amount of £911,997, apart from consequential losses. According to the report of the Royal Commission on Fire Brigades and Fire Prevention, the direct fire loss for the whole country amounts to £12,000,000, and in addition to this large figure some £4,000,000 must be added for the cost of fire brigades, both public and private, as well as a very considerable amount for loss of trade and various indirect losses.

Many of the fires occurring every year undoubtedly take place in readily combustible buildings, the design and construction of which contribute to complete destruction when once the flames are fairly started. But many others happen in buildings supposed by their owners to be of fire-resisting construction. If all the old buildings destroyed by fire were replaced by fire-resisting structures, and if all new buildings erected represented the most approved methods of fire-resisting construction, we might hope in process of time to arrive at the virtual elimination of structural damage by fire, although the inflammable contents of buildings would naturally continue to suffer.

Being composed of materials which are absolutely incombustible and practically infusible, concrete is invaluable as a fire-resisting material. Reinforced concrete is even more valuable, for, while as effective as plain concrete in withstanding fire, it is particularly suitable for the construction of completely fire-resisting buildings.

Turning to the resistance of reinforced concrete to heat, it should be remembered that the proportion of steel used as reinforcement is so small and so well distributed that the composite material behaves practically as if it were a refractory substance throughout. Well authenticated tests show that good concrete is characterised by so low a thermal conductivity that after exposure for two hours to a temperature of 1,500 deg. F. the rise of temperature is not more than from 500 to 700 deg. F. at a depth of 2 in. below the surface. Such an increase of temperature naturally causes a certain amount of expansion, but as the co-efficients of expansion for steel and concrete are of nearly identical value, nothing in the way of disruptive action is developed. It is true that some surface injury is generally noticed after a severe fire, in consequence of the combined action of fire and water, but the main body of the concrete and the embedded steel are rarely damaged appreciably even in fires of great severity. In one or two cases known to the writer, reinforced concrete beams have sagged after long exposure to great heat, but without failing, while as a general experience he has found both beams and columns to be unimpaired in strength after passing through the ordeal of severe fires.

Fig. 1.—Effect of Fire: upper part burnt out; Reinforced Concrete Floor intact.

Monolithic construction, discussed in a previous article, realises the ideal of a building where all the structural elements are securely interconnected. Therefore, floors cannot drop out and roofs fall in, as sometimes happens in composite buildings consisting of more or less loosely assembled materials of different kinds. Columns, walls, floors, stairs and roofs constitute an indivisible whole; and all parts of the construction help each other in bearing exceptional and accidental loads which may result from excessive heat at one or more points, or from the fall of heavy machinery or objects. Again, it is easy to design a reinforced concrete building, where desirable, in separate compartments by the provision of fire isolation walls having fire-resisting doors, or preferably fire-locks, as the only means of communication between adjoining compartments. In the case of buildings where quantities of inflammable liquids are stored, as, for instance, in distilleries, provision can be made for removing such liquids on the first outbreak of fire. An example embodying the two last-mentioned features is furnished by a bonded whisky store at Dundee. Rebuilt after fire, the present storehouse is entirely of reinforced concrete, divided into three portions by partition walls pierced only by firelocks, and incorporating reinforced concrete ducts through which all the spirit in stock can be run off in case of need.

The general questions of fire-prevention design and fire-fighting equipment are beyond the scope of this article, which is limited to the consideration of reinforced concrete as a fire-resisting material. Much has been published during the past few years concerning the highly satisfactory behaviour of reinforced concrete in great fires in America and elsewhere abroad. Instead of recapitulating such evidence, we think it preferable to deal with experience at home, and to summarise observations made after some of the comparatively few fires which have taken place in Great Britain.

Fig. 2.—Showing Reinforced Concrete Floor intact after severe fire.

NEWCASTLE-ON-TYNE.—In 1906 a fire broke out on the third floor of a warehouse, entirely of reinforced concrete. The fire was confined to a storeroom filled with bran nearly up to the ceiling. Owing to the dense fumes given off, the fire brigade were unable to gain access to the storeroom, and the fire practically burnt itself out. The partition walls were not damaged, and groceries stacked against them outside were not injured by heat. The only structural injury was on a small portion of the ceiling, on which jets of water had been played after the firemen were able to enter the room. Mr. L. G. Ekins, F.R.I.B.A., the architect to the owners, reported that the damage was repaired at nominal cost and that the construction was as sound as before the fire.

TRURO.—In 1909 a warehouse of ordinary construction, the property of the Western Counties Agricultural Association, took fire, barrels of oil and other inflammable goods being quickly ignited. The flames were blown through an adjacent reinforced concrete building (the fireproof doors of which had been left open), converting it into a veritable furnace and causing the explosion of a quantity of nitrate of soda. The directors of the Association afterwards stated that no injury was caused to the reinforced concrete building beyond a few abrasions and surface cracks on one of the outer walls.

LONDON: CLAPHAM JUNCTION.—One of several very destructive drapery fires about the same period took place in December, 1909, near Clapham Junction, S.W. When the fire broke out, there were about a thousand people on the premises, and although some fatalities

occurred, their number was fortunately small. Practical testimony to the value of concrete was furnished by the perfect condition of the concrete stairways after the fire. In every instance these remained intact, and undoubtedly enabled hundreds of people to escape from the upper parts of the building.

BIRMINGHAM.—In 1911 the contents of a paper warehouse at Birmingham were accidentally ignited, the flames rising to a great height above the building, which was entirely of reinforced concrete. Examination after the fire showed the only structural damage to consist of a small crack on two sides of an interior column and a little surface flaking under a panel of one floor.

NEWCASTLE-ON-TYNE.—Towards the end of 1913 a serious fire broke out in some works at Newcastle-on-Tyne. The upper part of the building was of ordinary construction, with timber roof framing, and used for the storage of paint and other inflammable materials. The floor below was of reinforced concrete, this material having been adopted with the object of preventing water used in grinding machines from dripping into the rooms below. Fire started in the upper part of the structure, which soon became a roaring furnace, and finally the roof crashed down upon the reinforced concrete floor (Figs. 1 and 2). The latter suffered no injury from either shock or fire, and is said to have saved the remainder of the building from destruction.

SILVERTOWN, MILLENNIUM MILLS.—Two fires have taken place in this important building, which is of reinforced concrete except in two departments where timber flooring was used, as the owners thought it might facilitate the shifting of milling machinery if occasion should arise in any future rearrangement of the plant. As will be seen later, this combustible flooring did lead to the shifting of machinery, but not at all in the direction contemplated! The first fire, in 1913, was confined to a very limited area by the concrete construction, and the only damage was that to combustible materials. The second fire, in 1917, began in a timber shed erected against one of the outer walls, and the flames passed through an opening into the main building. In the milling department four of the upper floors were of timber, carried by reinforced concrete beams, the top floor, together with its supports and the roof framing, being entirely of timber. As the flames raced through from floor after floor heavy masses of machinery fell from considerable heights upon the reinforced concrete beams of the first floor, the pile of wreckage increasing in height as successive floors were burnt through, until the beams began to bend, and, finally, under a load enormously higher than that for which they were designed, they pulled in some of the wall columns with connecting wall panels, leaving five stories of the upper construction without any support from below for a length of about 60 ft., yet without causing collapse or even perceptible injury of the part so left without support. The destruction of the timber floors enabled the flames to find their way to other departments of the mills, but without resulting in anything more than superficial damage to the reinforced concrete work.

SILVERTOWN, VENESTA WORKS.—As a result of the great munitions explosion in 1917, two buildings in the works of Messrs. Venesta, Ltd., were destroyed by the collapse of the brick walls, two others in their vicinity being swept by an intense fire fed by plywood and various combustibles. In one of these some of the floor beams suffered deflection and superficial damage was caused to interior columns (Fig. 3). The other building, however, suffered so little that it was used for manufacturing purposes shortly after the fire.

LONDON, PENTONVILLE.—Early in 1918 a German incendiary bomb was dropped on part of a boot and shoe manufactory in Pentonville-road. The building, of ordinary con-

Fig. 4.—Walsall Cinema Fire: Reinforced Concrete Balcony intact.

struction, was quickly destroyed with all its contents. The main portion of the works, communicating with the destroyed building, was of reinforced concrete, and suffered no injury whatever. and work was resumed as usual on the day after the fire.

NEWCASTLE-ON-TYNE, OFFICE BUILDING.—Early in 1920 a reinforced concrete skeleton building, with timber roof and timber partitions in the top story, was the scene of a fire which started in the basement, occupied as a cinema film store and repair shop. Flames and fumes rushed up the lift well, and within three minutes the roof and top story were burning fiercely. Apart from the destruction of these parts, the only damage consisted of superficial injury in the basement and lift well, offices on intermediate floors having been affected only by water.

WALSALL, CINEMA THEATRE.—A fire which broke out at the Walsall cinema theatre one night after the audience had left serves as an additional illustration of the difference between ordinary and reinforced concrete construction in relation to fire-resistance. Nothing escaped but the reinforced concrete balcony, the operator's room, the cafe at balcony level and the street front (Fig. 4). Mr. A. E. Douglass, M.Inst.C.E., who examined the ruins, reported as follows:—"The wonderful preservation of the balcony is a triumph for reinforced concrete. I examined the beams, columns and pilasters, and could not find any cracks. In my opinion the work is as good as ever, although all woodwork has been burned to cinders. The balcony has been tested by the borough engineer since the fire, and found to give the same deflections as when tested on completion under much smaller loading. This points to increase of strength during the three years which have elapsed since the work was finished."

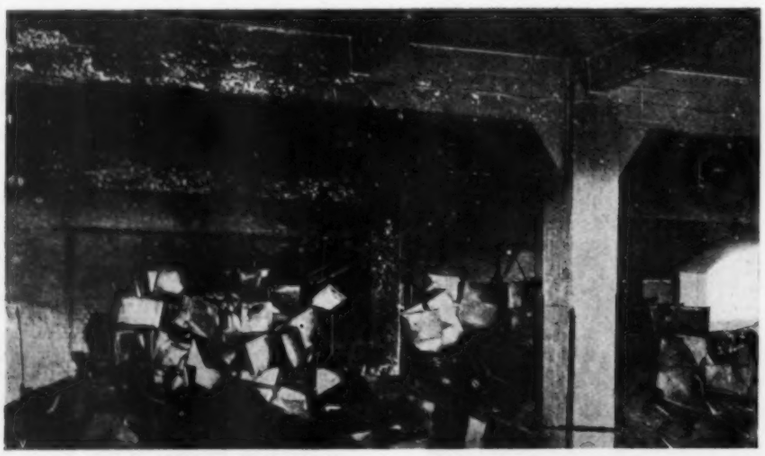


Fig. 3.—Reinforced Concrete Columns and Girders intact after Explosion and Fire at Silvertown.

BOOK REVIEWS

Strength and Elasticity of Materials. By E. P COSTON, B.Sc., B.Eng. Two vols. (London: Scott, Greenwood & Son.) Price 10s. 6d. net each volume.

In this work an attempt has been made to reserve the more difficult parts of the subject for the second volume, instead of dealing exhaustively with any one subject at once in the same chapter. There is much to be said for this method of treatment, for when reading a subject for the first time, it is very discouraging to meet with advanced problems at the first stage. In the first volume the simpler problems of stress, due to tensile, compressive, shear and torsional strains are considered. Thus beams, columns, shafts and springs receive consideration in the first 165 pages, and in the remaining 100 deflection of beams, resilience, bending combined with tension and compression, struts and columns are considered. In the last-named subject Euler's results are assumed, thus avoiding for the moment the difficulties of solving the differential equation involved in establishing the result from first principles. This demonstration is given later in the second volume. In the first volume some 262 examples are given, by means of which the student can test his grip of the subject matter. In the second volume compound stress, strains in three dimensions, and the more advanced problems of beams, struts and ties are considered. Unsymmetrical bending, open coiled springs, thick cylinders and spheres, stresses due to rotation, vibrations and critical speeds are dealt with in some detail, whilst the examples are increased in number to 505. The section dealing with the calculations relating to the stresses arising out of unsymmetrical bending is very complete, and will help to clear away some of the difficulties of the student attacking this section of the work for the first time. Altogether we can cordially commend the work of an author who, unfortunately, did not live long enough to see its completion.

Architectural Construction. Vol. I. By WALTER C. VOSS and RALPH C. HENRY. (London: Chapman & Hall, Ltd.) Price £5 net.

A distinct departure from the usual type of book on construction is shown in this volume. The idea underlying its preparation is that the student requires to study tangible realities in the form of buildings recently executed rather than theoretical materials. The treatment adopted by the authors is certainly original and there are many points in its favour, but at the same time the scope is limited and a large treatise is required to cover even a part of the subject. The book is divided into twelve parts, and seven of these are devoted to seven different examples of buildings erected in America; the first dealing with a cottage and the others with various types of houses, a school, a church, and an office building. The remaining parts describe additional details of construction, equipment and materials. Each section dealing with an example is illustrated by exterior and interior views of the finished building and complete plans and working details of all parts of the structure are

given, followed by specification clauses and explanatory notes.

The methods in America are very different to those adopted in this country, and the details given and the work specified will therefore not be applicable to the ordinary type of English building, especially as regards domestic work, but a great deal of valuable information is nevertheless provided for the student. An unusual but welcome feature is the part devoted to landscape work, illustrated by some good photographic views and plans which will be of assistance to architects generally.

The book contains over 1,200 printed pages, and those who wish to study American design and construction cannot do better than acquire it.

Structural Drafting, and Design of Details. By CARLTON T. BISHOP. (London: Chapman & Hall.) 1925. Second Edition. Price 25s. net.

The character and plan of this work is essentially such as will commend itself to the student and constructor alike. It consists of 45 chapters with appendices, grouped in three sections, *i.e.*, a short one introducing the scheme and range, the second and third each of about the same magnitude dealing with the drawing office work, and the principle of detail design respectively. The second part contains much concerning the methods of detailing orders, and lists of parts required for the correct ordering of such minutæ as rivets, bolts, nuts, washers, &c., so that erection may be properly proceeded with in the field away from stores, &c., without delay. Whole-page diagrams are numerous, giving details of connections between girders, columns, &c.; also lay-out plans for complete buildings. This section shows the usual completeness of knowledge of detail so frequently found in American text-books of applied science, and in this instance cannot fail to be of the greatest use to the College student as well as to the studious apprentice, thinking about the reasons for things as he finds them presented to him in workshops and during erection on the site.

In the third part neither abstruse calculations nor difficult presentation of theory will be found, but much useful work is done in connection with the elements of the proportioning and determination of the dimensions of the details of girders, columns, foundation grillages, &c., by means of examples. In this section will be found a large number of diagrams, tables, &c., which should be useful in the drawing office, for checking purposes and economising time. Altogether we think that this second edition will be found to be a worthy successor of the original.

English Rooms and Their Decoration at a Glance. Vol. II, 1620–1800. (Charles H. Hayward, 9, Queen's-gate, Westminster.) 5s. net.

This handy little book, Vol. II of the series, has the defects of its qualities. English rooms from 1620 to 1800 cannot be adequately dealt with in 85 octavo pages, of which rather more than half are taken up with 45 full-page illustrations. The drawings of parts of Jacobean to Georgian rooms, staircases, doorways, fireplaces, &c., are good, and the detailed items quite useful to the student or casual reader who does not desire to go very deeply into the subject; and the same may be said of the clear and concise text. The period covered by the book is that of the great Palladian architects who, like Inigo Jones, Wren, Vanbrugh, the Brothers Adam and their many pupils and followers, designed buildings complete with their decorative features and saw that these were carried out to the letter by their craftsmen. Mr. Hayward's illustration (No. 29) of a staircase at Queen's-square, Bath, built by John Wood in the first half of the eighteenth century, is a particularly pleasing one. An almost exact counterpart of this may be seen to-day—it narrowly escaped destruction by fire in 1914—at 33, Mark-lane, City, in the old-time official residence of the Spanish Ambassadors. There are minor differences in the graceful balusters of six patterns; but comparing it, book in hand, with the Bath example, we should imagine it to be by the same designer.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

"King Closer."

[REPLY TO "W. G. W.," FEBRUARY 12.]

SIR,—Without wishing to prolong the discussion, I think the following definition of a closer, taken from Russell Sturgis's "Dictionary of Architecture," may be of interest to your readers:—

"CLOSER. The last stone or brick laid in a course, fitted to the opening so as to complete the row. In brickwork, the closer may be a whole brick or less than half a brick; King closer more than half a brick, Queen closer less than half a brick; brick or brick bat, any portion of a brick having one unbroken end."

G. M. A.

SIR,—I do not agree with Mr. Randall's definition of a "King Closer" in your issue for January 29. I could quote several authorities to show that he is wrong. A "King Closer" is a bevelled brick showing 2½ in. on the face and 4½ in. at the back, so that it appears as a "Closer" (Queen) on the face.

THOS. J. GRENVILLE.

Plaster Ceiling.

[REPLY TO "TRUSTEE," FEBRUARY 12.]

SIR,—Scrape down the ceiling and remove all traces of paint and distemper; stop all cracks in plaster of Paris and re-coat with two or three coats of good water paint after sizing.

FRESH START.

SIR,—The chances are that the many coats of distemper were not properly removed before flatting, which was no good; glossy paint should have been used. I suggest the following as a likely remedy:—Wash off the distemper thoroughly, size the ceiling—even if on top of paints—paper same with a good lining paper (white) and then put on a relief paper and paint, say, two coats of glossy paint, but size the relief paper first. To renovate at any time apply one coat of washable distemper. G. W. H.

Girders Cased in Concrete.

SIR,—In most London buildings of the day, whether under building regulation or not it seems to be the practice to case all steel members in concrete. Where the by-laws do not impose a cover of 2 in. of concrete, it is a frequent practice to give 1 in. cover. In either case the strength of the member so cased is considerably increased by the wedging of concrete between the flanges. Can you inform me by what extent the strength of a steel member is increased by this treatment, and also whether the L.B.A. permits lighter steel work to be used when so cased than when uncovered? QUESTION.

Making Walls Soundproof.

SIR,—(1) In the case of 9 in. solid party walls already built, (*a*) would transmission of sound be materially reduced if a slab wall was built, say, 2 in. thick against the party wall, but with a small cavity between the new slab wall and the old party wall? (*b*) Would the sound be still further deadened by filling up the cavity so made with some material, and if so, what material would give the best results?

(2) Where new houses are being built, what construction is advised to give the best measure of security against sounds from one house penetrating to the next? F. PALMER.

"Provisional Sums."

[REPLY TO "ACCOUNTS," FEBRUARY 12.]

SIR,—"Prime cost," "P.C.," "prime cost sum," or "provisional sums," are terms applied to approximate amounts provided in the contract. The first three terms are used in respect to particular small items to be provided by the contractor himself, but the term "provisional sum" is used in respect to larger items or sub-let work which it is contemplated by the contract will be carried out by somebody other than the contractor himself, and if such specialist charges more than what is provided, the extra amount is added by the contractor, and is an extra on the contract. (See Hobbs *v.* Turner (1902), 18 T.L.R. 235, and Young *v.* White (1911), 28 T.L.R. 88.)

It appears from the particulars given by "Accounts" that the contractor was given the work provided to be done by a specialist, and that the work has cost more, and is therefore an "extra" on the contract, for which he is entitled to be paid by the employer what is reasonable, and on the basis of the contract.

The contractor under the circumstances was under no obligation to inform the architect that an "extra" would be involved, and there can be no question, since it is admitted that the architect did in fact furnish the designs, that the "extra" was duly authorised by the architect, and that on that alone the contractor is entitled to claim remuneration from the employer. (See Clause 12 of the R.I.B.A. form of contract, which it is stated was used.)

Now, although an architect has no general authority to waive or vary any of the terms of the contract or to alter the work and materials as defined in the drawing and specifications, and the R.I.B.A. form of contract does not, in this case, give him any express power to do so, here the employer is said to have assented to and approved the work done which has brought about the "extra.' In the circumstances and on the facts stated it appears there has been no "want of skill" on the part of the architect for which he could be held liable. It is not a case where the cost of the "extra" could have been brought to the notice of the employer before the work was done.

(See Creswell on Building Contracts.) LAW,

"Standard Rate of Wages."

[REPLY TO "INQUIRER," FEBRUARY 12.]

The contract indicated by "Inquirer" is one that has been largely used in housing and similar contracts by local authorities and others since the war. It provided for the varying conditions of labour and rates of wages consequent thereon. At the time it was framed contributions payable by the employer under Statute in respect of his workmen were within the knowledge of the parties to the contract, and were not expressly referred to therein. But neither of the parties to the contract entered into during 1924–5 could have foreseen that the employer's contribution to Health and Unemployment Insurance would be increased. Whether the contribution can be regarded in the light of additional wages paid the employee is a question for the Court to decide. The Act of 1925 does not appear to give any assistance to the question "Inquirer" asks, but inasmuch as the cost to him of the work is increased by what he has to pay out and for the benefit of the employee, such payment can only be regarded in the light of additional wages on which he should found a claim. Whether the claim could be sustained is, as before stated, a matter that should be tested in the Court.

LEGAL.

Slate.

SIR,—Would it be correct to say that "slate" as found at the quarries and used for roofing purposes has originally been of tree formation? Is its present state due to some chemical action? The grain of slate, in its close resemblance to wood, seems to support this theory. Can you suggest any book dealing with the history of slate quarrying? GEO. FOLKHARD.

Efflorescence in Concrete.

SIR,—I have recently used concrete with coloured cement for doorways and oriels of small houses costing round about £900. The result has been quite satisfactory except that efflorescence occurs. Can any of your readers give particulars of a process that stops efflorescence? J. B. D.

THE WEEK IN PARLIAMENT

WESTMINSTER, *Wednesday.*

Scottish Steel Houses.

A debate took place in the House of Commons last week on a Supplementary Estimate of £200,000 for advances towards the erection of steel houses in Scotland.

Sir J. Gilmour (Secretary for Scotland), explained that the housing shortage in Scotland made it incumbent on the Government to deal with the matter in drastic fashion. The subsidiary company which had been formed would consist of most of the directors of the original Scottish National Housing Company, with the addition of representatives of the Treasury and the Scottish Board of Health, and would co-operate with the Government in the building of steel houses. Any profits which had been made after the various charges had been met would return to the Treasury. All the evidence which reached him from those who were in occupation of steel houses showed that they were satisfactory; such minor defects as occurred were those which occurred in any other method of construction, and that they compared favourably with existing types of houses was beyond dispute. The step which the Government had taken was neither intended nor believed to be a challenge to the building industry. The Government stood on the report of the Bradbury Committee, and were satisfied that their scheme was a fair and reasonable solution of the problem. They proposed to proceed with the erection of these houses. He was anxious to co-operate in every possible manner with those who represented the great building industry, and to see the expansion of the supply of labour, more particularly in those sections of it which were essential. The spectacle of so many houses in the great city of Glasgow awaiting the plasterers and lathers was one which reflected materially, not on the Government, but on the great building industry, both masters and men, in that they had not got together to solve this problem. The new methods proposed were in essence the production of houses by mass production. Rapidity of construction and erection was an essential part of the scheme, and the money for which he was asking was to provide for the erection of at least 1,200 houses at a very early date. Preliminary steps had been taken, such as the acquisition of sites, in Glasgow, Edinburgh, Dundee, Greenock, Clydebank, and by February 20 they would be in a position to begin immediately the erection of these houses, which, before long, would be actually in being. It was not the intention of the Government to strike any blow at the great building industry. They felt that there was room not only for all the enterprise and energy of the building industry, but also for the additional methods. The Scottish National Housing Company would erect 1,000 houses purchased from Messrs. Weir, 500 from Messrs. Cowieson, and 500 of the Atholl steel houses.

Several Labour members then criticised the action of the Government, and alleged that Lord Weir was the power "behind the throne," and that he was out to reduce the standard of life of the workers. They did not object to the erection of steel houses if the operatives were paid the building rates of wages.

Mr. R. Mitchell (the Labour member for Paisley), however, supported the Government, praising the quality of the steel houses, and giving figures to show that the men working on them could earn £4 9s. and £6 6s. a week, and that they liked their work, which was by no means hard. The protest against this type of house did not represent the views of the people of Scotland.

Capt. Elliott, for the Government, said that Lord Weir was paying trade union wages, and the statutory fair wages clause was contained in his agreement. In Scotland, they had been able to pass this year for construction 14,000 or 15,500 houses. Of the houses it was proposed to build this year, 90 per cent. would be built by the traditional methods of construction and only 10 per cent. by new methods.

The vote was then agreed to without a division.

A Greenock Case.

Mr. Maclean asked the Secretary for Scotland whether he was aware that a demonstration steel house had been erected in Greenock; that the rent of this house was £40 exclusive of taxes, as compared with £29 rental for a brick house of similar size; that although advertised for some time no applications to rent it were received, although hundreds of people inspected it; and whether, in view of the large difference in rental in those types of houses, he would give instructions for the erection of brick houses instead of steel houses.

Sir J. Gilmour said that the house in question was a four-apartment one of the Atholl type and was erected by the local authority for demonstration purposes. The local authority had a free hand as to the rent to be charged and they had fixed it at £40. Three applications had been received for the house at that rent and these were now under consideration. The rent of £29 for a brick house was for a house of four apartments under the 1919 Act, and the financial conditions were not comparable. The difference in rental referred to seemed to point towards the necessity of reducing the cost of this type of steel house as had been done in the tenders recently submitted.

Weir House Materials.

Mr. Kennedy asked if the payment of subsidy on Weir houses was subject to any safeguard against the use of materials or fittings of foreign origin; and if he would inquire whether Messrs. Weir used British baths, rain water pipes and gutters, and steel in the houses erected by that firm.

Sir J. Gilmour said that under the Housing Act, 1924, the Government was prohibited from discriminating against imported goods in any scheme on which subsidy was being paid under that Act. He understood that hitherto a certain proportion of the baths provided in houses erected by Messrs. Weir had not been of British make, but that the rain-water pipes and gutters had been of British manufacture. British steel would be used in all houses erected by Messrs. Weir for the Scottish National Housing Company.

Rural Housing.

Mr. N. Chamberlain informed Mr. T. Thomson that 13,131 houses had so far been approved under the Housing (Financial Provisions) Act, 1924, for erection in the areas of Rural District Councils; 4,427 of these were in respect of agricultural parishes. Approval had so far been given to proposals for the erection of 205 houses under the Act of 1924 in rural districts in the county of Warwick, of which 117 would be in agricultural parishes; 26 of these houses (of which six were in agricultural parishes) had been completed.

Urban Town Planning.

Mr. Chamberlain informed Mr. T. Thomson that 267 urban authorities had prepared or were preparing town-planning schemes, a number of which extended to portions of other urban areas. The number of urban authorities with a population of 10,000 or over in whose areas formal steps had not been taken in the preparation of town-planning schemes was 289.

Historic Buildings.

Viscountess Astor asked whether the Commissioners of Works and Public Buildings took steps to preserve old and historic buildings now used as dwelling houses; and, in particular, whether any action was being taken, in conjunction with existing unofficial societies, to preserve cottage architecture?

Mr. Locker-Lampson said that the Commissioners were not empowered under the Ancient Monuments Act of 1913 to take over the guardianship, with a view to preservation, of ancient and historic buildings in occupation, and this precluded the Department from dealing with cottages, unless they were unoccupied.

Slum Clearances.

Mr. Chamberlain informed Mr. T. Thomson that the position in regard to the clearance of slum areas in England and Wales was as follows: Eighty-three schemes relating to 66 local authorities had been confirmed since 1919. On January 1 last tenders had been approved or loans sanctioned in respect of 48 schemes for the erection of new houses, in order to provide accommodation for the displaced population and to enable clearances of the areas to be commenced. In the case of 54 schemes the areas had been wholly or partially acquired, and clearance was in progress in 34 schemes.

Appeals.

Mr. Greene asked the Minister of Health whether he would consider the advisability of the Ministry publishing their decisions given upon appeals made to them under Section 3 of the Housing Act, 1925, in order that local authorities might know the construction placed by the Ministry upon the section.

Mr. Chamberlain said that the great majority of appeals under the Housing Act were concerned with questions of fact, the decisions on which depended on the particular circumstances of individual cases, and which, therefore, it would be unreasonable to treat as precedents necessarily binding in all cases. He was, however, considering whether it would be practicable to bring to the notice of local authorities, through the annual report of the Ministry and otherwise, any decision which appeared to involve any new and large question of principle.

Compensation.

Mr. Rye asked the Minister whether he would take steps to promote such legislation as might be necessary to amend Section 46 of the Housing (Consolidation) Act, 1925, so as to provide for payment of fair and reasonable compensation to the owners of property acquired under an improvement scheme in pursuance of such Act.

Mr. Chamberlain said that the question of legislation to amend in some respects this section had been receiving his attention, but he was unable to make any statement in regard to the matter at present.

The 1923 and 1924 Acts.

Mr. Chamberlain informed Mr. R. Davies that, on January 1 last, the latest date for which complete figures were available, the position under the Housing Acts of 1923 and 1924 was as follows:—

	1923 Act.	1924 Act.
1. No. of houses completed	131,302	19,800
2. No. of houses under construction	40,008	33,559
3. No. of houses definitely arranged for but not started	30,337	23,478
4. No. of houses authorised but not definitely arranged for	48,478	23,781
TOTAL (No. of houses authorised)	250,125	100,618

L.C.C. Housing.

Mr. Chamberlain informed Mr. Day that, during the year ended December, 1925, the number of houses completed by the London County Council was 1,982, of which 119 were let to Southwark inhabitants. During the same period the number of lettings of new and existing houses was 3,021, of which 190 were to Southwark inhabitants.

Inspection.

Mr. Hore-Belisha asked whether it was the practice of the Ministry to cause an inspection to be made periodically by any of their inspectors of houses built by local authorities with the aid of a subsidy from public funds, with a view to seeing that the houses were in all respects satisfactory.

Sir K. Wood replied: "No, sir. While, in special circumstances, arrangements are made for such inspection, it would not be practicable, nor in the Minister's opinion necessary, to do so as a matter of routine."

THE BUILDING TRADE

SOME OBSERVATIONS ON WORKMEN'S COMPENSATION.—VII

(IN CONNECTION WITH THE AMENDING ACT, 1923).

SECTION 8 of the principal Act is the next in order, which relates to

Industrial Diseases.

In the Act of 1925 the corresponding sections are 43 and 44. This section has been amended as follows:—By section 13 of the amending Act 1923 [44 (2) Act 1925] where a workman claims to be suffering from and disabled by an industrial disease the employer may agree with the workman that he is liable to pay compensation without requiring the workman to obtain the certificate of the certifying surgeon mentioned in section 8, and thereupon the workman shall be entitled to compensation as for injury by accident from the date of the agreement or from such other date as may be agreed. Any such agreement may be recorded in the manner provided in paragraph (9) of the Second Schedule to the principal Act [section 23, Act 1925], and shall be enforceable against the employer in like manner and subject to the same provisions as an agreement to pay compensation in case of an injury by accident.

Another amendment is introduced by section 11 subsection (2) of the amending Act 1923, which provides that where a matter is referred to a medical referee under paragraph (*f*) of subsection (1) of section 8 of the principal Act—that is, where either the employer or the workman is aggrieved by the action of a certifying surgeon—the medical referee when deciding the matter shall also certify the condition of the workman at the time he was examined by the medical referee, and such certificate shall be conclusive [43 (1) (*f*) Act, 1925].

The only other amendment of this section is contained in section 24 subsection (9) of the amending Act. Under section 8 subsection (1) paragraph (*c*) proviso (iii) of the principal Act [43 (*c*) (iii) Act, 1925], where a disease is a gradual process, other employers who have employed the workman during the twelve months preceding disablement or suspension may be called upon to make contributions to the compensation, and the amount of the contribution is to be settled in the arbitration in which the amount of compensation is settled, the words "or if the amount of compensation is not in dispute as may be determined by arbitration under this Act," are to be added to the end of the proviso, the meaning of this amendment being that if under section 13 subsection (1) of the amending Act the disablement from an industrial disease is admitted there will be no arbitration to "settle the amount of the compensation," but in such cases the contribution from other employers will be settled by arbitration.

We now come to section 13 of the principal Act, which contains the definitions.

Definition of "Workman."

In the first place, by section 9 subsection (1) of the amending Act 1923, the limit of £250 imposed on the remuneration of those employed "otherwise than by way of manual labour" has been increased to £350 [3 (2) (*a*) Act, 1925.] There has been considerable difficulty under the principal Act is determining how the provision as to remuneration is to be calculated, and in Reid *v.* British & Irish Steam Packet Co. (1921, 2 K.B. 310; *The Builder*, June 24, 1921) Lord Justice Scrutton pointed out that although the Act contained elaborate definitions or instructions as to how the earnings of a workman were to be ascertained for the purpose of compensation, it omitted to give directions with reference to this point of remuneration, and despite the fact that this point has caused much litigation, and even the House of Lords has had to be consulted (see Thomson & Co. *v.* Mackay; 1921, *Weekly Notes* 230; *The Builder*, July 29, 1921) the new statute has done nothing to elucidate how the remuneration is to be computed.

In Griffith *v.* Owners of the *Penrhyn Castle* (1917, 1 K.B. 474; *The Builder*, March 2, 1917) the Court of Appeal laid it down that there must be a contract of employment which, unless determined by notice or some extraneous cause such as death, or the destruction of the subject matter of the contract, will last a year and produce remuneration not exceeding the limit prescribed.

This definition was followed in Reid *v.* British & Irish Steam Packet Co., *ubi sup.*, and there is nothing in Thomson *v.* Mackay (*ubi sup.*) to overrule it, and it was followed in the very recent case Kerswell *v.* Perry & Co. (17 B.W.C.C. 198) where a man was engaged at a weekly wage of six guineas a week as a foreman and supervisor in February, 1922, and met with an accident on November 10, 1922, whereby he was totally incapacitated. After compensation had been paid for a time the employers raised the point that he was not a "workman" within the principal Act, as being employed otherwise than by way of manual labour his remuneration exceeded £250. The Arbitrator, the County Court Judge, held that as at the date of the accident he had received only £248 17s. in the nine months, his remuneration was under £250 a year.

The Court of Appeal, following the principle laid down in Griffiths *v.* Owners of Penrhyn Castle, held that the man's remuneration exceeded £250 a year. It was pointed out in Reid *v.* British & Irish Steam Packet Co. that the statute did not say remuneration "at the rate of" £250. It is, of course, only where the employment has become interrupted, either by the accident or other causes, that the difficulties indicated above are experienced.

Subsection (2) (*a*) of section 9 of the amending Act [section 3, Act, 1925] provides that "for the purposes of the principal Act the expression 'workman' shall include a person engaged in plying for hire with any vehicle or vessel, the use of which is obtained from the owner thereof under any contract or bailment (or in Scotland, any contract of letting to hire 49 (2) Act, 1925)—other than a hire purchase agreement, in consideration of the payment of a fixed sum or a share in the earnings or otherwise, and in relation to such a person the owner of the vehicle or vessel shall for the purposes of the principal Act be deemed to be the employer" (As to this latter provision, see 3, 2, Act, 1925.) Those letting out vehicles or vessels on such agreements should note the latter provision, as it has an important bearing on their protecting themselves by insurance.

Section 9 subsection (2) (*b*) [3 (2) (*b*) Act, 1925] makes an exception in the case of persons professionally engaged in games. Under the principal Act, the word "workman" did not include a person whose employment was of a casual nature if the person was employed otherwise than for the purposes of the employer's trade or business, but the new paragraph (*b*) provides that the expression "workman" shall include a person whose employment is of a casual nature and who is employed otherwise than for the purposes of his employer's trade or business, if employed for the purposes of any game or recreation and engaged or paid through a club, and in such case the manager or members of the managing committee of the club shall, for the purposes of the principal Act, be deemed to be the employer." [As to this latter provision, see 5 (3) Act, 1925]. This amendment seems only introduced *ex majore cautela*, for so long ago as 1910 the Court of Appeal had decided that a professional football player was a "workman," and could recover from the club. (Walker *v.* Crystal Palace Football Club, 1910, 1 K.B. 87; *The Builder*, November 22, 1909.)

It was always said that Englishmen take their pleasures seriously and this decision and the amending paragraph are confirmatory of the saying.

Section 9 subsection (2) paragraph (*c*) of the amending Act extends the operation of the principal Act to certain persons engaged on ships; masters, seamen, and apprentices to the sea service or sea fishing service, are within the principal Act under section 7, but by section 9, sub-section (2) (*c*) of the amending Act, any person, not being one of the above, employed on board any such ship as is mentioned in section 7 of the principal Act, if so employed for the purposes of the ship, or of any passengers or cargo or mails, is brought within the Act if he is otherwise a "workman" within the principal Act. [35 (4) Act, 1925.]

Partial Dependency.

Section 22 of the amending Act contains a definition of partial dependency which has to be read into the definition of "dependents" contained in section 13 of the principal Act.

The section provides: "For the purposes of the principal Act a person shall not be deemed to be a partial dependent of another person unless he was dependent partially on contributions from that other person for the provision of the ordinary necessaries of life suitable for persons in his class and position [4 (2), Act, 1925]. The definition of dependents contained in the principal Act, so far as this point is concerned, is: "Dependents means such members of the workman's family as were wholly or in part dependent upon the earnings of the workman at the time of his death or would but for the incapacity due to the accident have been so dependent."

The effect of the new section is as follows In Simmons *v.* White Bros. (1899, 1 Q.B. 1007), a case decided under the Act of 1897, where the definition of dependents was very similar to that in the principal Act, the Court of Appeal held that "dependent" meant dependent for the ordinary necessaries of life for a person of of that class and position in life. Subsequently the House of Lords, in Main Colliery Company *v.* Davies (1900, A.C. 362), held that the standard of living was not contemplated by the Legislature, and that it would be very difficult to ascertain what that standard was, and that what had to be regarded was "what the family was in fact earning and what the family was in fact spending." This new section has now been considered by the Court of Appeal in Peart *v.* Bolkow, Vaughan & Co. (1925, 1 K.B. 399; *The Builder*, December 26, 1924), and its effect has been held to be to restore the principle as laid down in Simmons *v.* White.

In Peart's case there was a family of five persons. The father, a miner, earned £3 11s., with free house and coal, estimated as an extra 5s.; the eldest son earned £1 0s. 6d.; the deceased, a boy of 14, earned 15s. 3d.; the mother and a child of 11 earned nothing. Thus there was a total income of £5 11s. 9d. paid by the working members into the family purse. In April, 1924, the boy of 14 was killed and the father was claiming as a dependent. The County Court Judge, sitting as arbitrator, was satisfied that, after deducting the expenses of maintaining the deceased, there would be a small balance paid into the family purse, and therefore a basis for compensation, and taking into consideration that the deceased would have advanced by rapid stages to higher wages, he awarded a sum of £50, in addition to the funeral expenses, which had been paid into Court. It was contended by the appellants that, taking the sum received as income, and considering the totality of the wages earned before and after the death, and the number of persons dependent on the fund, it would prove that, when four persons instead of five were so dependent, the fund was rather increased than decreased as

between the surviving four persons, but this argument was ruled out because it assumed that the cost of maintaining each of the members of the family was the same.

The following points were made clear in the judgments delivered in which the Court of Appeal supported the finding of the County Court Judge. The claim depends upon the dependant establishing in the first place that he is "dependent"; when that fact has been established, the Schedule can be applied to ascertain what compensation is reasonable and proportionate to the injury sustained. (See *per* Pollock, M.R.) Where, as in this case, the applicant is the father of the family, the statute in section 22 does not confine the necessaries of life to his necessities alone, but includes the necessaries of life for the family as a whole; (see *pe* Warrington, L.J.); the amount received must show a balance after deducting the cost of the maintenance of the deceased for the provision of the necessaries of life (Warrington and Scrutton, L.JJ.); the County Court judge is entitled to use his own knowledge, as he had done in this case, as to the cost of maintaining the deceased; when dependency has once been established, the arbitrator is entitled in assessing the compensation to take into consideration the prospective earnings of the deceased had he survived (Rennoldson *v.* Ellerman Wilson Line, 11 B.W.C.C. 72; Sheldon *v.* Butterley Co., 1919, 2 K.B. 600; *The Builder*, January 30, 1920).

Just before we go to press a most valuable judgment has been delivered by the County Court Judge of the Durham District in three cases, Kennedy *v.* Horden Collieries, Ltd.; Bamford *v.* Charlaw and Sacriston Collieries, Ltd., and Bevan *v.* James Joicey & Co. (1925, 2 K.B. 438), which received the approval of the Court of Appeal on the principles to be regarded in interpreting section 22 of the amending Act. He first stated the principle laid down in Simmons *v.* White (*ubi sup.*) that the Court has now to consider what is the standard of living of persons of the class and position of the applicant and then laid it down that *prima facie* the scale of expenditure adopted by the head of the family should be accepted as evidence of the standard of living of his class and position unless on the face of it it is grossly excessive or there is evidence to show that in fact it is higher than the standard at which persons in the same station of life generally and properly aim at; the section was probably intended to meet cases of the latter class, but as a rule what the family was earning and what the family was in fact spending for the purposes of its maintenance will be the principal factor in determining whether the applicant was partially dependent on the deceased for the ordinary necessaries of life suitable to his class and position; there is no common standard for all men engaged in the same employment; the expenditure varies greatly from family to family and depends on a variety of circumstances, the number of children, their ages and sexes, and whether any are working and the amount of their wages; moreover, although a man's occupation is an important factor in determining his class and position, that question does not depend solely upon his occupation; also the actual expenditure of the majority employed in a particular occupation ought not to be made the test, for in bad times the actual expenditure of the majority may be below the standard of life at which they legitimately aim; the word "necessaries" should be given the same meaning as is applied to it in contracts by infants as including all such things as are necessary to maintain the particular person in his state, station and degree.

These are the main points laid down in the Judge's judgment which, as we have said, received the approval of the Court of Appeal, but we append some of the particulars in one of the cases which he considered near the border line.

Family of five persons, father, mother, two sons, and a daughter aged 15. Earnings:—

Father	£3 9 8
Deceased (aged 30)	3 9 0
Second son (aged 17)	1 0 11
Weekly budget	£7 19 7

The father had coal and house free; the deceased had army reserve pay 7s. The deceased paid all his wages to his mother and received back from her 10s. or 12s. pocket money and bought some of his clothes out of that. The family purse was therefore £7 7s., and the family spent the whole of that or £1 2s. 8d. per head. Award, taking all future contingencies into consideration, £150.

W.D. SCHEDULE OF PRICES 1925

THE War Department Schedule forms the basis of contracts for works and repairs all over Great Britain. The 1925 edition, which has been delayed in publication by the trouble in the printing trade, has just been issued. In June, 1922, we reviewed the Schedule published in that year. As we then pointed out, the old Schedule, which had served its purpose with many revisions for many years, had been discarded and the new Schedule was an entirely new production. Three years' experience shows that the general scheme, on which the 1922 Schedule was based, was well conceived. With the exception of the prices for plumbers' work, where abnormal advances in the price of lead caught many experienced buyers napping towards the end of 1923, prices have needed but little revision. Such revision has been carefully done to represent current prices. It is interesting to note that *The Builder's* suggestion made in the review of the 1922 issue, that where columns or beams of reinforced concrete have to be left unfinished, they should be left off "at the intersection of the column or pier with the haunching of the floor beams," has been incorporated in the 1925 issue. In the 1922 Schedule prices generally were for "materials and labour" and "labour only," the latter prices being inserted to check work carried out by direct labour. Such work is almost always expensive, and as directly-employed labour has now been reduced to a minimum, the "labour only" rates generally have been deleted and replaced in many cases by prices for work, "except bricks," &c. It will be remembered that the old system of measuring brickwork by the foot cube was brought into line with modern practice in the 1922 Schedule. The prices per rod of reduced brickwork would have been unwieldy in such small quantities as are usually met with in repair work and in its place a unit of per foot super of reduced brickwork was adopted. This experiment has apparently been successful and is continued in the present issue, except in the case of cutting openings in existing walls, where the foot cube item has been reverted to as being more convenient. The Schedule is brought thoroughly up-to-date by inserting a specification and prices for reinforced concrete roads.

In the Electrician section the specification and schedule have been revised and brought up-to-date by the addition of such items as prices for wiring circuits with cab-tyre wiring, switch and cut-out sets, &c.

Perhaps the most important revision is the entire re-writing of the specification for painting, both in respect of materials and also in the incorporation of the latest Home Office Instructions. Analysis of bases, thinners, &c., may show that these are up to the standard called for in the specification, but if the paint is unduly thinned, work which will stand the hard wear in barracks and similar institutions will be impossible. A very handy check on this practice is to weigh known quantities of the ready-made paints taken from the painters' kettles on the job, and a table of weights is given from which can be calculated whether the paint is up to the standard weights.

Valuable additions have been made to the memoranda. A table of the number of slates per square, including waste, has been added. A synopsis of the British Standard Specifications of materials used in Building Work is included, and the Ministry of Transport Specifications for Tar Treatment of Roads are given in summary form.

The "Slump Test" for concrete is becoming recognised as the best practical method of testing concrete, but the particulars have not previously been given in ordinary books of reference. Clear and concise notes on the theory of the test are given on page 257 of the Schedule, followed by a description of the standard slump mould and methods of making the experimental tests and applying the tests on the works.

We regret to learn that Colonel T. E. Coleman, late Chief Inspector of Works at the War Office, and the well-known writer on technical subjects, died suddenly just before Christmas. To him and to his chief colleague, Major J. B. Bradshaw, is the credit of having given us a workmanlike Schedule.

We understand that stocks of the Schedules are held by Commanding Royal Engineers in charge of the various works areas in Great Britain, and architects and others may obtain copies on payment of 12s. 6d.

THE MINISTER OF HEALTH AND BUILDING SOCIETIES

THE Minister of Health in a recent letter to the Chairman of the Building Societies Association expressed the hope that the widest publicity would be given to the comparative figures in the return of the Registrar General of Friendly Societies relating to Building Societies, as they afford a notable example of the success which may be achieved by private enterprise without charge to the public funds. The figures for 1923 and 1924, the latest available, showed an increase in membership from 895,594 to 1,000,988, and of income from £61,574,528 to £72,582,450. The amount advanced during the year on new mortgages showed an increase; the figures for the two years respectively being £32,015,720 and £40,584,606, and the total assets had advanced from £124,718,790 to £144,889,705. The Minister observed that if comparison were made with earlier years the results were still more striking, but the provision in one year of a capital sum of over £40,000,000 was no small contribution to the housing problem. The Minister also commented on the steady increase in the number of owner-occupiers of houses with approval, as ownership carries with it a sense of responsibility which is undoubtedly a stabilising influence in national life as well as an addition to the dignity of home life.

Mr. Chamberlain, in the course of the letter, observed that some societies confined themselves to advances for the purchase of existing houses, whilst others were willing to make advances for the building of new houses, and expressed the hope that it might be found possible for the societies to extend their activities in the latter direction.

One of the difficulties of prospective owners, the Minister observed, was to find the capital required to meet the difference between the amount advanced by the building society and the actual cost of building or purchase, and he was glad to see that about 50 local authorities had availed themselves of the powers conferred by the Housing Act, 1923, to guarantee additional advances by the Societies, and he hoped that other local authorities would find it possible to co-operate in this way.

Birmingham Improvement Schemes.

The Birmingham City Council is considering a scheme for reconstructing the interior of the Town Hall on lines which will not only improve its appearance and acoustic properties, but increase the seating accommodation by 500. Sir Charles Allom has prepared plans for the reconstruction, which, it is estimated, would cost over £36,000. A scheme for widening and deepening the waterway between Birmingham and the Mersey, at a cost of £6,500,000, is also under consideration.

DILAPIDATIONS AND WASTE.—VII

By W. T. CRESWELL, Lic.R.I.B.A.
Associate (late Fellow) Surveyors' Institution; F.R.S.I.; Barrister-at-Law.

ALTERATIONS—REINSTATEMENT.

It may be stated that a breach of the repairing covenant arises when alterations are made to the demised premises, such as to change the nature and character of the buildings; saving only, when such alterations are necessary to adapt the premises to the uses permitted under the terms of the lease, and involve no injury to the reversion. For example, to make a door opening through a wall into a house or within a house, is a breach of the covenant to maintain the wall; and to keep it open is a continuing breach (see Doe *v.* Jackson [1817] 2 Stark, 293.) But in Doe *v.* Jones (1832) 2 L.J.K.B. 11, the lessee, for his convenience in using the premises as intended, enlarged windows, opened up external doors, and took down partitions. It was held these alterations were no breach, being anticipated by the covenant, which read "to repair and to keep in repair the dwelling-house, together with all such buildings, improvements, or additions as should be erected, set up, or made by the lessee." However, in Elliott *v.* Watkins (1835) I. Jones 308, an Irish case, premises were let as a dwelling-house, and the lessee made similar alterations as in Doe *v.* Jones (supra), in order to alter the character of the premises to that of a shop. This was held to be a breach, as obviously the alterations carried out were not anticipated. In Hyman *v.* Rose (1912) A. C. 623, the premises leased were intended for use as a chapel, and the covenant to repair included to yield up in repair the premises and all improvements. Although its use for certain trades was prohibited, there was nothing to suggest that it was always to be used as a chapel, though it was in fact used as such, for sixty years. The lease was then sold, and the premises were adapted for a cinematograph theatre, and substantial alterations were made to the premises. It was held that in view of the fact that the lease did not prohibit the contemplated user of the premises, none of the alterations, in the circumstances, constituted either a breach of covenant or waste.

Pulling Down.

A covenant to repair neither compels or authorises the lessee to reconstruct all or any part of the demise, but where, as when the demise is of land, there is a power given to grant building leases the lessee may assume an authority to pull down old buildings so as to erect new ones in their place. See Jones *v.* Verney (1739) Willes, 169.

Under a covenant to keep premises in repair, it is a breach to pull them down either wholly or partially; and it is not an equitable defence that it received the subsequent acquiescence of the lessor. It must be shown that it was not begun without his previous consent. (See Gauge *v.* Lockwood (1860) 2 F. & F., 115. In Doe *v.* Bird (1833) 6 C. & P. 195, the lessee covenanted to repair, uphold, support, and sustain and maintain the brick walls to the demised premises, and he pulled down a wall dividing a front from a side courtyard of the house. The covenant was held to have been broken thereby.

In Green *v.* Eales (1841) 2 Q.B. 225, the landlord covenanted to repair and keep in repair all external parts of demised premises. The adjoining house was pulled down and the party wall was exposed and was without support, and had to be rebuilt. It was, in fact, rebuilt by the tenant on the landlord refusing to do so. It was held that this was an external wall, and that the tenant was not liable to keep it in repair, and in the circumstances was entitled to recover the cost of rebuilding from the landlord since that was essential to the stability of the house.

When the repairing covenant anticipates or permits reconstruction, pulling down a building is not a breach of the covenant to repair when it is taken down for the purpose of rebuilding and the lessee rebuilds before the termination of the lease. In McIntosh and Pontypridd Improvement Co. (1891) 61 L.J.Q.B. 164, there was a covenant to repair by the under-lessee and the local authority required to purchase a strip of the land on which the demised buildings stood. The under-lessee proposed to pull down and re-erect the premises, leaving the required strip free. It was sought to restrain him, but it was held that as there was no negative covenant in the lease against pulling down and rebuilding, the lessee was entitled to pull down and re-erect the premises.

In Doherty *v.* Allman (1878), 3 A.C. 709, there was a covenant by the lessee to preserve, uphold, support, maintain and keep the demised premises and all improvements made, etc., in good, sufficient order, repair and condition. They were first used as corn stores, then as barracks and dwellings for married soldiers; and on the buildings requiring repair, the lessee stated his wish and intention to convert them into dwelling houses and so increase their value; but the lessor, in bringing this action, desired to restrain him—alleging waste. It was held that this was not the case of a negative covenant to be enforced, the words of contract being clear and indisputable, but that the waste was "ameliorating" waste and that the Court in its discretion would not interfere to restrain the lessee from converting the premises.

Dependent Covenants.

In general, a covenant by the lessee to keep in repair "from and after" the time when the lessor has repaired creates a condition precedent, and the lessee's covenant is obviously dependent upon the lessor's covenant, the latter being bound to put in repair before the lessee can be held liable for "keeping in repair" (see Neale *v.* Ratcliffe [1850], 15 Q.B. 916). Further, if the lessee assigns the lease he is entitled to recover damages from the lessor, under the covenant, for the cost of all repairs not carried out by the original lessor under the covenant, whether the repairs are carried out prior to the assignment or afterwards, see Gooch *v.* Clutterbuck (1899), 2 Q.B. 148. If, however, the covenant is expressly worded to exclude the lessor's liability from the date of the demise, the lessee has no remedy once he has taken over the premises. In Hawkins *v.* Sherman (1828), 3 C. & P. 459, the words in the repairing covenant were: "It is agreed that the lessee shall keep the house in good repair, the lessor putting it in good repair." It was held that this created a covenant on the part of the lessee to do all repairs, and that an action lay against him if he did not do so.

New Premises.

Where there is an agreement for a lease of a new house, there is an implied covenant on the part of the lessor to complete and deliver the house up in repair; and it is a condition precedent to the tenant's liability to accept the lease.

Provision of Materials with which to Repair.

When the lessee's covenant to repair provides the whole or certain portions of the materials necessary for repairs are to be supplied by the lessor, the lessee's liability to repair appears to be conditional upon the lessor being both ready and willing to supply the materials (see Westacott *v.* Hahn [1918], 1 K.B. 495). In Tucker *v.* Linger (1882), 21 Ch.D. 18, the lessee agreed in one clause to repair and the lessor in another clause to find materials for the repairs. It was held that they were independent stipulations, and that the lessee's liability was not conditional. Where, too, a lessee covenanted to repair before a certain date, and the lessor to supply some of the materials required, it was held that the failure of the lessor to provide the materials punctually did not absolve the lessee from his covenant to keep in repair; but that this failure did absolve him from putting in repair before the given date. In Bristol (Dean) *v.* Jones (1859), 28 L.J., Q.B. 201, the lessee covenanted to repair and the lessor to provide for "having or taking in and upon the demised premises competent housebote, etc.," (*i.e.*, a sufficient allowance of wood for repairs and fuel) "for the doing thereof without committing any waste or spoil." In an action by the lessor against the lessee for not keeping the premises in repair, it was held that the covenant to repair was absolute, with a licence to the lessee to take competent and sufficient housebote, etc., and that the failure to find such competent and sufficient housebote, etc., upon the premises did not absolve the lessee of the liability to repair.

Approval of Repairs by Lessor.

A lessor cannot arbitrarily withhold his approval of the repairs done by a lessee where his approval is a condition precedent to the lessee's right to repair, or, for instance, when a certain sum out of the first year's rent is to be returned by the lessee towards the cost of such repairs. If the covenant is to repair according to the "directions" of the lessor's architect or surveyor, the failure to appoint such an agent absolves the lessee from liability; but if the covenant is to repair to the "satisfaction" of the lessor's surveyor, then it is not a condition precedent, but there is an absolute covenant to repair, as the architect or surveyor may be appointed at any time to give final approval.

Omission to Comply with Covenant to Build.

A covenant to repair may be broken by not building. In Bennett *v.* Herring (1857, 3 C.B.N.S. 370, the lease contained a covenant to complete unfinished buildings within a certain time and to keep them in repair during the demise. The buildings, as a fact, were never completed, but their carcasses became dilapidated. It was held to be a breach of the covenant to repair. But there is a release of the covenant where the lessor has sanctioned the omission to build. Such sanction may be implied by the lessor acquiescing in the omission over a long period (see Gibbin *v.* Payne [1905], 22 T.L.R. 54). However, in Stephens *v.* Junior Army and Navy Stores (1914), 2 Ch. 516, where the lessee had covenanted to erect new buildings, it was held that the covenant to keep in repair was not broken by their non-erection.

Building Research Work.

The Acton offices and laboratories of the Building Research Station will soon be transferred to more spacious premises at Watford. Scientific work is already in progress at Watford, but the Engineering Test Shop and the Furnace Room are not completed. The estimated total cost of acquiring the new premises and removal is £21,700.

Ulster Architects.

At a general meeting of the Ulster Society of Architects, at Belfast, the following office-bearers were elected:—President, Mr. John Seeds; vice-president, Major James Ferguson; hon. secretary, Mr. R. H. Gibson; hon. treasurer, Mr. Thomas Eager; council, Messrs. R. M. Close, D. W. Boyd, W. D. R. Taggart, Gordon O'Neill, and Thos. Houston; associated members of council, Messrs. Jackson, G. Smyth, and W. H. Silk.

MODERN BUILDING PRACTICE

MAJOR R. J. HOLLIDAY (President of the Institute of Builders) recently gave an address at the London County Council School of Building, Brixton, on "Modern Building Practice." Mr. H. D. Searles Wood presided.

Major Holliday said the subject of modern building practice was much too large to be dealt with completely or in any great detail in one evening, and, moreover, anyone wishing to speak on it was at once faced with the question, "When did ancient building practice cease and when did modern building practice begin?" The subject had no beginning and no ending in sight, for, like other industries, the building industry was in a continual state of evolution. When they were at school they were taught that "Balbus built a wall." They were not told in what bond or with what tools, but they had it on the authority of a recently-published book that if they examined the craftsmen's kit of tools as used to-day in some of the building trades they would find very much the same tools as were used by his early ancestors. And he expected that if Balbus built another wall, although they might find rates of wages, working hours and building conditions somewhat different to-day, the wall he built to-day would be substantially the same as the one he built in their school books, except, perhaps, in the matter of foundation. Again, he might discuss the comparatively modern employment on a large scale of reinforced concrete construction, and again, would probably find that the principle of reinforcement was of great antiquity. If he were asked what were the essential differences between ancient and modern building practice he thought he would say that although traditional materials and traditional methods still obtained, because they had been justified by experience, to-day they relied more upon the work of the scientist and the mathematician and less upon tradition; that, in harmony with a similar development in industry generally there was to-day a strong vertical chain in the organisation of building practice, as well as the ancient horizontal link between the various crafts, and also that the use of machinery had been greatly extended. In the past the same proportions of a dome were arrived at by the erection of a considerable number of domes and the experience gained of domes which stood up and domes which fell down. Mathematical theory which could indicate safe dome proportions had only been developed during recent years. There was a stone bridge over the Taff which was built by one Edwards, a self-taught mason. This man had never built such a bridge, and it was not until the first bridge had been swept away by flood and the second bridge had collapsed through defect in proportion, that he succeeded at the third attempt in building the bridge which stood to-day. This was an example of the ancient method of progress by trial and error, a repetition of which method the arrival of the mathematician and the scientist would, they hoped, make impossible to-day. A hundred years ago *The Times* printed an account of the opening of the Menai Straits suspension bridge, and commenting on this the previous day the same paper remarked that beautiful though this bridge was, the suspended portion of the bridge, which weighed only 490 tons, was carried on chains with a power calculated to equal over 2,000 tons—an example of an excessive and wasteful safety margin which the greater scientific knowledge of to-day would have avoided. When, in 1850, this bridge was superseded by another—the Britannia Bridge—the builder, Robert Stephenson, was faced with a new force—railways—and with the opportunity of using a new material, *i.e.*, wrought iron. It was said that it was in connection with the demand of civilisation for roads that the aid of scientific experts was first sought by builders, and that the construction of the Britannia Bridge over the Menai Straits was almost the first one in which the mathematician was called in. The problem involved the strength and behaviour of a new material under a new type of load, the moving train. The mathematician decided that the bridge should be a hollow box girder, and its section. The builder was not satisfied, and confirmed his mathematician's accuracy with large models which he tested to destruction; Still unsatisfied, he finally carried up the piers.

He felt it would be best if he outlined the way in which a contract was carried out from beginning to end. He did not intend to deal with jobbing work, or with the development of estates, but with a business like his own, which dealt with the erection of commercial buildings in large cities. The building owner had dealings, directly or indirectly, with the architect, the quantity surveyor, the master builder, craftsmen, manufacturers, transport service, local government and central government authorities, and, of course, the lawyer. As a rule the architect did not arrive until the building owner had selected a site and was prepared to build, but he would suggest that the owner would do well always to consult the architect before purchasing a site. The building owner then instructed the architect to prepare the necessary plans after stating what his requirements were and the amount of money he was prepared to spend. Having produced the drawings, and the quantity surveyor having done his work, the contract for the erection of the building was put out to competitive tender. If the building owner was a public authority the work contemplated might be advertised to open tender. The same conditions might apply to very large works, and also in times when the building industry was seriously depressed. In the first case the reason of open tendering was protection of the public purse against abuse; in the last case the reason for open tndering was to discover the rock bottom of the market and possibly to discover someone who was so anxious to secure the contract that he submitted a price which was much too low to cover the cost of the work, let alone to show a margin of profit. But even in the case of public authorities experience was proving that there was sufficient competition if the number of contractors invited to tender was limited, and care was taken to include in that number only builders who were securely established and sufficiently financed, equipped and organised to undertake the proposed work. In the case of privately-owned buildings usually the architect had a group of builders working for him in whom he had confidence. The quantity surveyor might suggest to the architect other names and the building owner further names, and from time to time no doubt the architect went outside his circle to another contractor in order to test the rightness of the tenders he was receiving. To these gentlemen copies of the bills of quantities, specifications and drawings were sent and from this information the builder made up an estimate for the work. This estimate was prepared in the builder's estimating office after prices had been obtained for work and materials delivered to the site, the special peculiarities of the site had been studied, including such problems as access, supervision, and any special conditions under which the work would have to proceed. The estimate was affected by the condition of the labour and material market, and was especially affected by the location of the site in relation to access, transport facilities and an adequate supply of craftsmen.

The speaker next dealt with the responsible work which had to be carried out by the builder's estimating surveyor, whose knowledge should be almost as great as that of the quantity surveyor. This included a sound knowledge of quantity surveying and a knowledge of costing for the preparation of estimates. A young estimating surveyor should do all he possibly could to master the art of quantity surveying and the preparation of data upon the lines laid down in the textbooks. Very frequently it was necessary to ascertain the probable cost of proposed works for the guidance of the architect and building owner, and the method usually adopted to prepare such an approximate estimate was carried out on a cubic basis which consisted of ascertaining the cubical contents of the whole building and multiplying this total by a price per cube foot. Considerable experience was necessary in order to arrive at the price per foot cube that the building should cost, and that was arrived at by comparing the proposed structure with a similar building that had been carried out for which the total cost had been ascertained, including the price per foot cube. At the present time one could not say that cube prices were very reliable, and they should only be used when a very approximate total cost of work was required.

In due course the builder attended with a tender at the architect's office, where all tenders were opened and the amounts read out, and one of the builders was usually fortunate or unfortunate enough to secure the contract, which brought them to the very interesting topic of building contracts. Not so many years ago contracts varied considerably, but common law, contract law, case law, the law of equity, and the various laws which applied to employers' risks and insurances had made the necessity of agreed forms of contract apparent. Years ago a form of contract was agreed upon by the Institute of Builders and the Royal Institute of British Architects, and this form, which was revised in 1909, was still the basis of most of the agreements between contractors and building owners. But although this form of contract had stood the test of many years and would doubtless be the basis of any revision, it was not improbable that in the near future there would be a revision of the form by agreement between the architects and builders. He might say that the form of contract might be based upon one of two sets of conditions. The contract might be to carry out work in accordance with drawings and specification, or it might be to carry out the work in accordance with drawings, specifications, and bills of quantities, the latter being the more usual practice and the one most likely not to lead to differences as to the proper execution of the work involved.

For various reasons, chief among which was the tendency in these days to specialise, a comparatively new type of man had grown up, who was known as the sub-contractor. Within certain limits, the builder was responsible for the sub-contractor's work, for the proper execution of it, and for the payment of it. For these reasons, and as it frequently happened the sub-contractor was the architect's nominee, the builder who had many legal obligations in connection with the sub-contractor's work in turn required from the sub-contractor an agreement with himself in accordance with the terms of the main contract between the building owner and the contractor, and any special risks outside these terms in which the contractor might be involved in connection with that work.

The speaker dealt next with the time clause in contracts and pointed out the importance to the builder of placing such orders as he could advantageously and of making sure that materials and work would be ready and delivered to the site at the precise moment they were required. Whilst in theory it was true it was the function of the architect to guide the various trades of the building industry into their proper channels, and although he appointed a clerk of works to keep personal watch on behalf of the owner on the progress of events, the actual organisation and guidance of the various trades for the proper supervision of the work in progress happened also to be the duties for which the builder was paid. The builder, in the economical performance of these duties, had built up an organisation. Most important builders, in addition to their joinery works, possessed or controlled shops and yards for the organisation and execution of most or all of the work in the various trades comprised in the term "building practice."

The lecturer described the chief features of such organisation, and touched on the subject of the artificial seasoning of timber, which, during the past ten years, had been adopted by several contractors in London. The object was to make freshly imported timber useable, at once, instead of having to stack it for the long period required for natural seasoning. Timber

was not diminished in bulk or decreased in strength by the process; in fact, tests carried out went to show that, if anything, the strength of the timber was increased.

Before he could start on the site, the builder had to satisfy himself that the requirements of the local authority had been met, and the yard foreman who was in charge of plant would visit the site and in conjunction with the general foreman arrange means of access to and egress from the site and for the immediate and future delivery of plant. The general foreman would be established on the site and would proceed to set out the building. Whilst this was happening, the builder's buyer was busy obtaining quotations for delivery of materials in accordance with the conditions. In the preparation of the estimate, there had probably been a close *liaison* between the estimating department and the buyer, and this *liaison* must continue during the execution of the work. As a rule, the builder held the general foreman responsible for ordering from the head office everything that was required and also for stating the dates on which the various sub-contractors would be required to commence and complete their work; but the builder also looked to the buyer to check these orders with the bills of quantities and variations ordered by the architect, and it might be necessary for him to consult the estimator who prepared the tender. What the builder had to study, ascertain and organise in order to secure a proper return for his risk, was the economical execution of the work. The builder's cost department was still a record office, but there was growing up a school of thought and practice which, while admitting that it was easy to overload the shop with scientific costing methods, advocated and employed men and systems which enabled the builder to know accurately and without delay what each important item in a contract was costing. The builder must, of course, carry a staff to deal with insurances, books, and the general administration of his business, and of late years he had been obliged by the Legislature to add to the administrative charges on industry a staff to deal with special insurances.

Proceeding, the speaker dealt with the subject of payment to the builder at various stages of the work till the final certificate of the architect was given. In conclusion, he said he recognised that the "whole cannot exist without the part," and that their industry to-day was based upon good craftsmen and good craftsmanship, which, like a rock, had existed throughout the ages—superficially changed, perhaps, by the progress of time and events, but essentially the same rock as it was centuries and centuries ago.

At the conclusion of the address, a vote of thanks was passed to Major Holliday, on the motion of Professor Beresford Pite, seconded by Mr. Faulkner.

AFFORESTATION

In a lecture on "Recent Forestry Development," at a recent meeting of the Surveyors' Institution, Mr. William Ling Taylor, F.S.I., said State forestry prior to the war was an ill-nourished bantling, for whose welfare no one seemed at all anxious to take responsibility. The Report of 1909, however, compelled some notice, and spurred the Government of the day to take action by placing forestry under the wing of the Development Commission, by whom steps were taken to appoint advisory officers, further to stimulate landowners to interest themselves in their woodlands. With the assistance also of this department, emergency seed beds were sown towards the close of the war in the Crown nurseries, and these afterwards proved a most valuable asset. There were no properly managed State forests from which inspiration could be drawn, and the position was that from an estimated three million acres of woods in the United Kingdom, all but 3 per cent. of which were in private ownership, very little merchantable timber was produced, the yield from these woods, which, after all, represented only about 4 per cent. of the total area of the British Islands, not being estimated at more than 15 cubic feet per acre per annum, or, roughly, a quarter of what it should have been under systematic management.

The inroads upon our woodlands to provide for the necessities of the war were a devastating set-back to estate forestry. Almost all the mature stands of coniferous timber, and many which were immature but of pitwood size, were felled, and by 1918 very little softwood timber remained in most parts of the country. Large quantities of hardwoods had also gone, including the best of our ash, and there could be no doubt that we were on the verge of very uncomfortable times. It was about a year prior to this juncture that the Forestry Sub-Committee of the Reconstruction Committee was set up, under the chairmanship of Mr. F. D. Acland, "To consider and report upon the best means of conserving and developing the woodland and forestry resources of the United Kingdom, having regard to the experience gained during the war." Their Report was issued in 1916 and laid down the broad principles on which a national forest policy should be based, the immediate objectives, and the means of obtaining them.

The national forest policy defined by the Acland Committee fell under two heads:—

Firstly: A 10-year scheme based on a block grant.

Secondly: The creation in the United Kingdom of reserves of standing timber sufficient to meet essential requirements over a limited period of three years in time of national emergency.

The ten-year scheme was provided for by the Forestry Act, 1919, and was to be regarded as an instalment of the larger plan. It included the afforestation of 150,000 acres of new land by direct action of the State, the purchase and reconstruction of hardwood areas, and the encouragement of local authorities and private owners to afforest or re-afforest a total of 110,000 acres. The education of forest officers, landowners, and agents, research, experiment and the fostering of forest industries were also part of the scheme for the whole of which, for the ten years, a fund of £3,500,000 had been voted. This fund had to bear all the incidental charges of the Forestry Commission, including establishment. The larger objective recommended by the Acland Committee as a result of their exhaustive inquiry aimed at the ultimate afforestation of no less than 1,770,000 acres of land not previously planted, of which 1,180,000 acres should be planted in the first forty years; and, at the same time, the taking of steps to secure the continuance under timber, and to obtain an increased yield from, the 3,000,000 acres of woodland which existed in 1914.

Training in forestry was proceeding at the apprentices' schools at Parkend in the Forest of Dean, and at Beaufort in Inverness-shire, where selected men satisfactorily completing a two years' course were granted certificates of proficiency. These men were then absorbed without difficulty into the departments organisation the colonial forest services, or by private estates. Courses of training for forest officers leading to degrees or diplomas in forestry were provided at the principal universities, and in 1924 arrangements were made to give effect to a resolution of the British Empire Forestry Conference, held in Canada the previous year, for founding at Oxford an institution, now known as the Imperial Forestry Institute for post-graduate courses. The Institute was controlled by a Board of Governors, of whom the university nominated one-half, and the Forestry Commission and the Colonial Office the remainder.

New London Home of Health.

As the result of an anonymous gift of £4,000 a new National Home of Health is to be established in London as the headquarters of the New Health Society. A scheme has now been completed for acquiring premises in the West End which will house lecture-rooms, library, a social health centre, and other departments.

"ACQUIESCENCE" IN LAW AND EQUITY

The last of the programme of special lectures at the College of Estate Management, Lincoln's Inn Fields, was delivered recently by Mr. David Bowen, F.G.S., M.I.M.E., Barrister-at-Law, whose subject was "The Effect of Acquiescence in Law and Equity." Mr. Bowen said that the Courts strove to do justice between parties upon a footing of what might shortly be described as fairplay and honest dealing. In spite of the fact that legal rights and obligations were commonly defined in certain documents and written contracts, there were relationships brought about without any reference to documents, in which relationships the law might decide that an unjust claim of one person against another could not stand. He gave several instances of what was meant by acquiescence in this respect. For example, an owner of land, knowing that certain land was his and not another's, allowed that other to build upon it, he (the other) thinking that the land was his, and then, when the house was completed, the landowner claimed to take the house from its builder because it had been erected on his land; in such a case the law would say that as the owner of the land stood by, or acquiesced, or slept upon his rights, he could only take the house on the condition that he indemnified the builder of the house (who had acted upon a wrong assumption but had had no intimation from the owner that the land was his), for the expense to which he had been put.

The lecturer gave other instances of the same principle in relation to vendor and purchaser. It was the duty of the vendor on a sale of land to disclose to the purchaser every latent defect of which he was aware; he need not disclose patent defects which the purchaser could find for himself if he looked around. If the vendor did not disclose such latent defects the purchaser could afterwards require from him compensation for damages or even the rescission of the contract. The silence of the vendor was considered as a representation. Mere conduct—a series of acts or non-acts—might be the foundation of a representation just as it might be the foundation of a contract.

Another class of case related to principal and agent. If a principal clothed an agent with apparent authority and the agent's authority was really limited by secret instructions, a person dealing in good faith with that agent was entitled to assume that the apparent authority was real authority, and the principal could not afterwards be heard to say that the transaction entered into between the agent and the third party should not be allowed to stand. If A said that he was acting as agent for B, and C on the faith of this entered into a contract with A, and B's skill or personality or character as compared with that of A was a material inducement to C to enter into the contract, A was precluded from saying afterwards that B was not his principal, and C was entitled to his remedy.

He gave another example from landlord and tenant. If a landlord, knowing that a breach of covenant had been committed and that he had a right to re-enter and to require the forfeiture of the lease, yet accepted rent from the tenant which had accrued not only after the breach but after he knew of the breach, the acceptance of that rent was equivalent to treating the tenancy as still in being. The acceptance of the rent was an implied acquiescence by the landlord in the breach of the covenant, and therefore the landlord could not afterwards demand the forfeiture of the lease. The lecturer said that these and the many other examples which he quoted would suffice to show that the law, after all, was not concerned solely with the construction of legal documents, but that it took into consideration the conduct of parties, upon which, after all, the majority of mercantile contracts were based.

LAW REPORT

STANDARD RATE OF WAGES.

Higgs & Hill, Ltd. *v.* Brown & Others.

[COURT OF APPEAL.]

(LORDS JUSTICES BANKES, WARRINGTON, AND ATKIN.)

IN this case the defendants, E. J. Brown, Fredk. Thorne, W. J. Rudderham, Sir Walter Lawrence, Dudly Bartlett, and H. T. Holloway, members of the Council of the Master Builders' Association, appealed from an order of Mr. Justice Finlay in Chambers dismissing their appeal from the order of Master Daldy upon an application by the defendants for leave to amend their statement of defence.

The plaintiffs, Messrs. Higgs & Hill, Ltd., builders and contractors, by the action claim damages from the defendants for alleged libel contained in letters dated January 26 and 30, February 28, and March 31, 1925, sent by the defendants to the Royal Institute of British Architects, to certain architects, builders, quantity surveyors, and other persons whose names the plaintiffs did not at present know. The plaintiffs also asked for an injunction to restrain the defendants from further writing, circulating, or otherwise publishing the said libel or false statement or any further or other libels concerning the plaintiffs in the way of their business.

Mr. Stuart Bevan, K.C., in support of the appeal, said the Master only allowed the amendment on condition that certain particulars were given by the defendants. The action was of the class discussed some time ago, in which Bovis, Ltd., were the plaintiffs against the same defendants. The case hinged on what was known as "Wage-rate default." In 1920 a national agreement was entered into between the builders and the men, and an agreement was come to by which the wages should be fixed and paid on a national basis. These were disputes which were referred to Sir Hugh Fraser. In the beginning of 1925 the question as to the payment of rates more than the rates fixed came up, and the Association passed by-laws that those builders who did this should be asked to sign an undertaking that they would give no more than nor less than the standard rate of wages prevalent, and that in the case of disputes about the hours of labour and other matters they would follow the decision of the Committee of the Master Builders' Association. What happened in the present case was that having reason to suppose that the plaintiffs were paying more than the standard wage rate the defendants sent them a circular and asked for an undertaking to be signed; the plaintiffs signed agreeing to pay no more or less than the standard rate, but they refused to follow the directions of the Association in trade disputes. Upon this the defendants declared them to be in "wage-rate default," in accordance with the by-laws. The defendants justified that view, saying that wage-rate default had a peculiar and definite meaning. The defendants said and pleaded that what they had done and written was true in substance and in fact. The Master had, on the application of the plaintiffs, struck out that part of the plea of justification as to the special meaning of "Wage-rate default." The summons before the Master by the defendants was for leave to amend the defence, and their proposal was to strike out a certain part of the statement of defence and substitute for it a defence which covered several pages of printed matter.

Mr. Barrington Ward, K.C., for the plaintiffs, contended that the order of the Master and of the Judge in Chambers should be affirmed. Apart from the innuendo, the plaintiffs complained that the words used by the defendants, read by sensible persons, inferred that the plaintiffs actually broke the undertaking they signed.

Lord Justice Warrington thought that as the words "wage-rate default" were in inverted commas in the Circular they inferred that they were taken from the by-laws.

Mr. Barrington Ward submitted that in the public eye the words bore a defamatory meaning and reflected on the plaintiffs, and that what the defendants sought to do was irregular and would widen the issues which the plaintiffs set out to meet and ought not to be allowed.

Lord Justice Bankes, in giving judgment, said the matter before the Court involved a question of principle. If the defendants wished to justify they must justify the language complained of, and the question was what were they entitled to justify? They must be entitled to justify the whole range of the plaintiffs' complaint. They must be entitled to justify or attempt to justify the innuendo as alleged and the language used in its ordinary and natural meaning. In his opinion the order was made under a misapprehension. He thought in justice to the parties and in order that the real issues might come up for trial, the Court should allow the appeal as to the plea in the defence part of which the Master had struck out, and the appeal must be allowed on that point.

The other members of the Court concurred.

As to the particulars, Mr. Stuart Bevan said the defendants would give the best particulars they could, and Mr. Barrington Ward accepted that.

The costs of the appeal were made costs in the action.

THE BRITISH INDUSTRIES FAIR

THE British Industries Fair, now being held at Birmingham under the auspices of the Board of Trade and the City Council, will remain open until the 26th of this month. The exhibition buildings cover an area of 200,000 sq. ft. and shelter a very comprehensive array of building materials and plant.

Among the more important exhibits are the following:—Messrs. Ruston & Hornby, Ltd., of Sheaf Ironworks, Lincoln, show two of their cold starting horizontal oil engines, one capable of 130 B.H.P. and the other of 45 B.H.P., and their Thermax patent cross-tube boiler.

The Eclipse Rail Track Ladder Co., of Bristol, are showing ladders, trestles and scaffold boards in patented extension patterns, and lattice steps with ordinary or folding treads.

The General Electric Co., Ltd., of Magnet House, Kingsway, London, W.C.2, exhibit a large display of electrical devices and material, including "Witton" motors, switchgear, telephones, generators, rotary convertors, turbines, mechanical engineering equipment, measuring instruments, "Osram" lamps and valves, "Freesor" fans and domestic appliances. "Express" lifts, for passenger, goods and service, are also on view.

At Stand 4 of Building "A," Messrs. the Bedfordshire Tile Co., Ltd., of Leighton Buzzard, are exhibiting their "Bedfordshire" interlocking and "Broseley" concrete roofing tiles. These interlocking tiles, we understand, are easily fixed and dispense with felt, boarding and nails, and thus effect a considerable saving of timber.

The Well Fire and Foundry Co., Ltd., of 15, Berners-street, London, W.1, have on view several well fires in fusion stone; this latter material possesses a surface of fine texture and one that can be obtained in any colour.

Messrs. Tonks, Ltd., of 201, Moseley-street, Birmingham, have arranged a demonstration of patented specialities under normal conditions of use, embracing springs, panic bolts, indicating locks, fanlight openers, casement hinges, and similar devices.

Bath Artcraft, Ltd., of Lower Bristol-road, Bath, is represented on Stand 114, of Building "A," by a selection of wood mantelpieces—this includes reproductions of period mantels and new designs in modern styles. Mirrors and samples of panelling are also on view.

A working exhibition of the "Workwell" and "Triplex" cast-iron grates is being given by the Triplex Foundry, Ltd., of Great Bridge, Staffs, on Stand 116 of the same building. We understand that these grates have been extensively adapted by Birmingham and other large corporations.

National Ladders, Ltd., of Hooper's-square, London, E.C., are showing their "2 in 1" ladder, which locks automatically in step and long-ladder positions, the arrangement for locking and release being secure and simple. The "Multijob" lattice step combination is also on view.

The Elsan Manufacturing Co., of 34, High Holborn, London, W.C.1, have on view their "Britol" disinfectant; a sanitary system suitable for rural buildings, no water or drains being required; and the "Milestone" oil gas cooker.

A comprehensive display of grates, from the small barless fire to the latest combination range, is being given by Messrs. S. Smith & Sons, Ltd., of Smethwick and Birmingham. Attention is called to an addition to the "Foresight" make of stoves—the "Foresight Junior "portable combination.

Messrs. Tangyes, of Cornwall Works, Birmingham, are showing two of their machines running—one 47 B.H.P. heavy-fuel oil engine, cold starting, and a lamp-ignition 15 B.H.P. engine. They have also on view a centrifugal pump, four vertical ram pumps of new design and a six-stage turbine pump, chain pulley blocks and screw lifting jacks.

On Stand 110 of Building "B," Messrs. Waygood-Otis, Ltd., of 54, Fetter-lane, London, E.C.4, and 62, Lionel-street, Birmingham, are showing an interesting model of an automatic electric passenger lift, specimens of hand-power service lifts for private residences, and auxiliary lift fittings.

Messrs. Earle, Bourne & Co., Ltd., are exhibiting on Stand 125 in the same building various specimens of their products. These include cold-rolled brass and copper; solid drawn brass and copper tubes for the condenser, building, sanitary and plumbing industries; sectional tubes for electrical and shopfitting; bends in square brass tube, etc.

BOROUGH POLYTECHNIC

THE Duchess of Atholl, D.B.E., M.P., presented the certificates at the annual distribution on Friday, February 12, to students of the Borough Polytechnic, Southwark, S.E.

Mr. J. W. Bispham, the Principal, stated that one of the higher certificates, with distinction, in reinforced concrete design, had been awarded to Mr. C. E. Doble, who had also been awarded the prize given by Mr. Clifford Highton, M.A., Chairman of Governors, as the most diligent and successful student of the past three years.

Mr. Highton mentioned that with regard to the heating and ventilating course of studies it had hitherto comprised a period of four years. Now the Governors had been able to add a class for a fifth year. Structural engineering and reinforced concrete studies had developed among the students.

The Duchess of Atholl said that in her view technical education was of great importance from a national point of view, because it helped to increase the number of highly-trained craftsmen. When they had to meet a great deal of competition from abroad, everything that helped to increase the efficiency of production in this country was of vital necessity to the welfare of the country as a whole. She was glad to note an increase in the number of students attending building classes.

Bermondsey Beautification.

The Beautification Committee of the Bermondsey Borough Council proposes to transform the Borough into a garden suburb; 9,000 trees have already been planted, and it is expected that in four years' time every street will have become an avenue.

Sheffield Building Association.

At the annual meeting of the Sheffield, Rotherham, and District Building Trades' Employers' Association, Mr. Walter H. Forsdike was elected president. Mr. A. Waddington was elected senior vice-president, and Mr. A. G. Treherne, junior, vice-president. Mr. A. J. Belton was re-elected treasurer.

PREMIUM AND THE RENT ACTS

THE case, Rush *v.* Mathews (1926, 1 K.B. 75), which we noted when decided by a Divisional Court, in our issue for November 6 last, has been appealed, and the Court of Appeal has confirmed the judgment of the Divisional Court. The case arose out of a perfectly frank transaction by which it was hoped to get round the provisions of the Rent Acts. The plaintiff was the landlord of a flat, and the defendant, in response to an advertisement, had seen the plaintiff's daughter with a view to entering into a tenancy. He was told that the rent would be 25s. a week, but that the flat was within the Rent Acts, and to obtain more than 13s. 6d. a week, it was proposed to grant a lease for fourteen years at a rent of 13s. 6d. a week, with an additional sum of 11s. 6d. a week as premium. In addition to this a premium of £10 to be paid down was asked, but this is not material to the decision.

The proposed tenant agreed to this, and the form the transaction took was a lease for fourteen years at a yearly rent of £35 2s. (this representing 52 weekly payments of 13s. 6d.), payable in 52 equal instalments on the Monday in every week, the tenant being at liberty to determine this lease upon giving one week's notice in writing. On the same date a separate agreement was entered into as follows: "In consideration of your having granted me a lease for fourteen years with the option to determine the same on one week's notice, I hereby undertake to pay you the sum of 11s. 6d. weekly by way of premium, commencing on October 30, 1923," that being the date of the lease. Two rent books were given to the defendant, containing receipts for the above sums respectively.

The defendant paid the £10 premium down, and both the above sums for six weeks, but then refused to continue the payment of the 11s. 6d. as premium, and the plaintiff brought these proceedings to recover the premium under the above agreement. Section 8 of the Rent Act, 1920, by subsection (1), provides that a person shall not, as the condition of the grant of a tenancy, require the payment of any fine, premium, or other like sum, or the giving of any pecuniary consideration in addition to the rent, but subsection (3) provides that "this section shall not apply to the grant, renewal or continuance for a term of fourteen years or upwards of any tenancy." The Divisional Court had held that reading these two documents together, both sums were rent. The judgments in the Court of Appeal are at present only shortly reported in the *Weekly Notes* (February 13), but in affirming the decision of the Court below the Court confined its decision to the particular facts of this case. The Court held that from the statement of the plaintiff's daughter it was clear that the two sums mentioned in the two documents were regarded by the parties as rent, but the premium agreement was also bad for uncertainty; it did not specify how long the premium payments were to continue, and if the tenant availed himself of the option to determine the tenancy, the liability under this document would continue for the whole period of fourteen years. The document was too vague and uncertain. Therefore, from any point of view, the plaintiff could not succeed. We may refer again to this case when the judgments in the Court of Appeal are fully reported.

In the Divisional Court, Mr. Justice Salter made some interesting observations in regard to the premium agreement. He is reported as having said that a premium is a payment for the right which a tenant receives when the lease is signed to occupy the premises for the specified or any shorter period, and that right is of equal value, whether he stays for the whole term or a shorter period; but in this agreement the sum called "premium" varied with the length of time the tenant stayed, and thus was not even a premium payable by instalments but rent.

HOUSEBUILDING: BREACH OF CONTRACT

[COMMUNICATED]

THE Hull Stipendiary Magistrate, sitting as a Special Referee, recently heard an action brought by Mr. F. C. Bettesworth (plaintiff), Hessle, against Mr. A. H. Evans (defendant), builder, Hessle. Mr. R. F. Burnand (instructed by Mr. B. Pearlman) appeared for the plaintiff, and Mr. Macfarlane (instructed by Mr. G. S. Williamson) represented the defendant. The plaintiff claimed damages for breach of contract on the part of the defendant.

The plaintiff stated in evidence that he took to the defendant a plan prepared by Mr. F. Runton, builder, and asked the defendant for a price to build a good and substantial house in accordance with this plan. The defendant estimated that to erect the house in the situation selected would cost £650. Before the contract was completed the defendant intimated that he was willing for £700 to build the plaintiff his house, the explanation given for the increase being that the builders' strike had affected the price of building. The plaintiff agreed to this increase in price, and the contract was signed for £700. He stated that after some delay the house was built, and he paid the defendant the sum of £700 and entered into occupation on February 11, 1925. When in the house he found that the water from the well was polluted, and later the pump would not work and defects were noticed in the house.

The defendant stated in evidence that he contracted to build for £700 a house to the plan on the site selected in all respects as good as a model house which he had built and which he showed to the plaintiff prior to the contract. He denied that the house was defective.

After evidence in support of both sides, the Referee ruled that the contract was entered into between the parties some time in September, 1925, and that the defendant had agreed to build for the plaintiff on the site as good and substantial a house as could reasonably be expected for £700, allowing a fair profit to the builder.

The case for the plaintiff was heard later, and evidence was given by Mr. J. Malcolm Dosser, F.R.I.B.A., to the effect that he had inspected the house, that it was not good and substantial, and was not worth more than £500.

Mr. H. Andrew, A.R.I.B.A., gave evidence in detail of defects in the house.

Mr. G. Dudley Harbron, F.R.I.B.A., stated that the house was not worth more than £500, that it was of subsidy house size, and that such houses were declared, with land, to have cost £550. He estimated the value of the land of a subsidy house at £80, and to build a detached house on the site in question the increased cost would be £32 14s.; he corroborated the previous witnesses as to cubic value and defects.

For the defence Mr. Peter Gaskell, F.R.I.B.A., stated that the extra cost of building such a house on the site in question would be over £100. that beam filling was not unusual in this class of house; the claim for making good the alleged defects was exorbitant, and the house was better in many details than a subsidy house.

Mr. A. Frank Houldsworth, architect, gave evidence to the effect that the plaintiff's claim was unreasonable. The house was worth £700.

At the conclusion of the case, the Special Referee, at the invitation of counsel on both sides, went to inspect the house, the subject matter of the action, and on returning to the Court delivered his judgment, holding that the house which the defendant had built was not such a house as the plaintiff might reasonably have expected the defendant to build for the sum of £700, and, as there had therefore been a breach of the contract by the defendant, he accepted Mr. Burnand's contention as to what the measure of damages should be, namely, that the plaintiff should recover whatever amount it would cost him to put the house into the condition in which it should have been left by the defendant. He gave judgment for the plaintiff for £190 10s. 2d. and costs.

THE ECONOMICS OF TAXATION

In the first of two lectures on this subject, given at the College of Estate Management, Lincoln's Inn Fields, W.C. 2, recently, Mr. W. H. Coates, LL.B., B.Sc., late director of statistics and intelligence, Board of Inland Revenue, said that out of twenty million employed persons in Great Britain and Northern Ireland, fewer than five million in the last year for which he had figures fell within the income tax area—that is, £135, assessable income; or, roughly, £150 or £160 actual income. Much controversy had raged over the point as to whether taxes should be paid in proportion to benefits received or to the ability of the individual to pay. It was only within comparatively recent years that this second view—the faculty theory, as it was called—had come finally into its own. The soundness of this theory rested upon two principles, the first relating to the statistical distribution of income; and the second to the law of diminishing utility, whereby, beyond a certain point, all fresh accessions of income brought a steadily diminishing satisfaction.

The speaker then passed in review some of the principles laid down by Adam Smith, and considered how far they were fulfilled in the existing method of taxation. He emphasised, in particular, the necessity that a tax should be productive. A tax on betting, for example might produce no more than from £3,000,000 to £5,000,000, and if that was a true estimate the question had to be faced whether it was substantial enough to justify the economic readjustments which always followed a fresh tax. Was it worth while to spend £100 just to get £100? In business life different considerations might apply, but the State had to decide how much it would spend upon the machinery of tax collection and the checking of evasion, and whether the total yield would justify the expenditure. The fact, of course, had to be remembered that, apart from yield to the State, if there were not sufficient means for checking evasion the result would be to do gross injustice to the honest taxpayer. He also pointed out that, in addition to the expense of the State in collecting the tax, there were various costs to the taxpayer himself, such as the employment of an expert on his accounts; or, in the case of customs, costs incidental to delay, warehousing, and disputes. All this had to be taken into account when considering whether a tax was economic or not.

The speaker also touched on the question of indirect taxation, and the way in which it might be said to infringe one of the Smithian canons, that the tax which each individual had to pay ought to be certain and not arbitrary. He was afraid that the complexity of modern business and the ingenuity of the human mind would convert this canon into an almost unattainable ideal; nevertheless, it was very true that the quantity of tax to be paid should admit of no doubt or difficulty.

In considering the Smithian canons from the Revenue point of view, the speaker remarked on the desirability of simplicity in assessment, but also on the fact that after long investigation the effort to find a simplified form of return for income tax had come to next to nothing. Simplicity was hard to obtain also because the system of taxation was one of long building, the product of forces which had been in existence for very many years, and simplification, however desirable theoretically, bristled with practical difficulties.

Blackfriars Station Improvements.

Structural alterations are to be made to Blackfriars Station in order to link it up with the public subways and also to improve the facilities for handling the traffic at the station itself. Contracts for the work have been placed by the Underground with Messrs. Joseph Westwood & Co., Ltd., and Messrs. L. & W. Whitehead, Ltd.

NEW BUILDINGS IN LONDON

Barking.—Barking Wesleyan Circuit have decided to erect a Wesley Hall and Sunday Schools at a cost of about £30,000 to £40,000, to the designs of Messrs. Alfred Gelder & Kitchen, architects, Alfred Gelder-street, Hull.

Blackheath.—Plans have been presented for improvement to the "Lord Northbrook" public house, owned by Messrs. Watney, Combe, Reid & Co., Ltd., brewers, including provision of luncheon room, &c. Mr. M. T. Saunders, architect, Stag Brewery, Westminster, S.W.1.

Camberwell.—Old premises at 52–56, Ormside-street, S.E., are to be demolished and new factory and warehouse buildings erected. Messrs. Lewis, Soloman & Sons, architects, 133, Moorgate, E.C.2.

Catford.—The public house on Perry Hill known as the "Two Brewers," is to be rebuilt by the present owners, Messrs. Noakes & Co., Ltd., of Bermondsey, S.E.1, at a cost of about £8,000. Mr. Nowell Parr, architect, 42, Cranley gardens, South Kensington, S.W.7.

Chiswick.—Premises in Vaughan-avenue, W., and the Stamford Brook Mansions, Goldhawk-road, W., are to be purchased by the London Electric & Metropolitan District Railway Companies and the Southern Railway Co. for an enlargement of Stamford Brook Station on the Kensington and Richmond branch railway. Plans by Engineer's Dept., 55, Broadway, S.W.1.

Croydon.—A shopping arcade, consisting of single and double-fronted shop premises, is to be erected in Addington-road, Sanderstead, in connection with a housing scheme being carried out on an adjoining estates. Messrs. Richard Costain & Sons, Ltd., builders, Blundellsands, Limegrove, and FitzAlan House, Arundel-street, W.C.2.

Edgware-road.—The Aerated Bread Co., Ltd., Camden Town, N.W.1, are to build a new restaurant at the corner of Edgware-road and Praed-street, W.2. Messrs. T. H. Adamson & Sons, builders, 145, Putney High-street, S.W.15. Messrs. T. P. Bennett & Son, architects, 41, Bedford-row, W.C.

Fenchurch-street.—A large office building is to be erected to provide for the accommodation for Lloyd's Register of Shipping. Messrs. Collcutt & Hamp, architects, 126, Wigmore-street, W.1.

Greenwich.—New buildings, including a nurses' home, pathological department, &c., are to be added to the Dreadnought Seamen's Hospital. Sir Edwin Cooper, architect, 4, Verulam Buildings, Gray's Inn, W.C.1.

Hampstead.—A grant of £14,000 has been made by the Middlesex C.C. towards a scheme of the governors of the Hampstead Garden Suburb Institute for the enlargement of their building, at a cost of over £30,000, including a new art school. Sir Edwin Lutyens, R.A., 17, Queen Anne's Gate, Westminster, S.W.1, and Mr. C. E. Hanscomb, F.R.I.B.A., Station-approach, Sanderstead, Surrey, associated architects.

Hanwell.—Middlesex Education Committee are to purchase a site in Drayton Bridge-road for the erection of a secondary school. to the design of their architect, Mr. H. Crothall, F.R.I.B.A., Guildhall, Westminster, S.W.1.

Hanwell.—A fund is being raised to provide for the building of a new church on a site in Boston-road, to the design of Messrs. Williams & Cox, FF.R.I.B.A., architects, 34, Henrietta-street, Strand, W.C.2.

Hendon.—A row of shops, with flats above, approached by separate entrances, is to be built on a frontage in Walm-lane, N.W. Messrs. North, Robins & Wilsdon, architects, 35–39, Maddox-street, W.1.

Holborn.—A further section of the large printing works and warehouse in Gray's Inn-road, W.C., is now being built for Messrs. D. Hulton & Co., Ltd., Manchester, proprietors of the *Daily Sketch*. Messrs. Holland & Hannen and Cubitts, Ltd., builders, 258, Gray's Inn-road, W.C. Mr. H. Rangley, architect, Withy-grove, Manchester.

Holborn.—It is proposed to build a new wing for the treatment of child patients at the Royal Free Hospital in Gray's Inn-road, W.C., at an estimated cost of £50,000. Messrs. Ashley & Newman, FF.R.I.B.A., architects, 14, Gray's Inn-square, W.C.

Homerton.—Adjoining property has been purchased by Messrs. Matthews, Smith & Co., Ltd., box and packing-case manufacturers, High-street, E.9, for an extension of their factory, to be erected to the plans of Messrs. Meakin, Archer & Co., architects, 73, King William-street, E.C.

Kew.—A new dairy is to be established in North-road by Messrs. Edwards & James, Ltd. (branch of United Dairies, Ltd.), of Richmond, Surrey, and alterations are to be put in hand. Plans by Company's architect.

Maze Hill.—It is estimated that the cost of removing the Road School for Girls, at present at Greenwich, S.E., to its future proposed site and to build premises accommodating 500 scholars, will be at least £60,000. Sir Banister Fletcher, F.R.I.B.A., architect, 1, King's Bench-walk, Temple, E.C.4.

Mortimer-street.—Evacuation commences this week of part of the Middlesex Hospital, prior to the pulling down and rebuilding of the first section of the premises under the £500,000 reconstruction scheme. Mr. A. W. Hall, F.R.I.B.A. (Messrs. Young & Hall, 17, Southampton-street, Holborn, W.C.), architect.

Old-street.—Considerable building work is being carried out at 341, Old-street, for Messrs. S. Tyzack & Co., machinery merchants and engineers. Messrs. Patman & Fotheringham, builders, 15, Park-street, Islington, N.1. Messrs. Fairbrother, Ellis & Co., surveyors, 29, Fleet-street, E.C.4.

Oxford-street.—A large garage and repair shop, with extensive showrooms, is to be erected on a site in Balderton-street, W.1, for Messrs. Macy's, Ltd. Messrs. F. & H. F. Higgs, Ltd., builders, Station Works, Hinton-road, Herne Hill, S.E. Messrs. Wimperis, Simpson & Guthrie, architects, 61, South Molton-street, W.1.

Piccadilly.—The London Electric & Metropolitan District Railway Companies are to acquire No. 7, Piccadilly, Nos. 44, 46, and 48, Regent-street, and Nos. 1, 3, 5, and 7, Shaftesbury-avenue, W.1, for reconstruction and other purposes in connection with the new Piccadilly Circus "Tube" Station. Mr. Z. Knapp, Director of Reconstruction, Electric Railway House, Broadway, S.W.1.

Piccadilly.—The interior decorations, shop and display fronts, fittings, &c., for the new showrooms on the ground floor of the new Devonshire House, at the corner of Berkeley-street, W.1, are being designed by Messrs. George Baines & Son, F.R.I.B.A., architects, 121, Victoria-street, Westminster, S.W.1, acting for Messrs. Citröen Cars, Kensington, W.

Poplar.—New Roman Catholic schools are to be built in Grundy-street, E.14, to provide accommodation for 290 children at a cost of, approximately, £12,000. Mr. William Simms, builder, 137, Brook-street, Stepney, E.1. Mr. T. A. B. Scott, architect, 11, Finsbury-square, E.C.2.

Purley.—A range of buildings, comprising workshops, lock-up garages, and showrooms, is being erected, with frontages on the Brighton Road and Windermere Road, for Messrs. K.I.M. Motors, Ltd., Croydon.

Putney.—New shops and flats are to be built on a site in Putney Bridge approach, S.W., to plans by Mr. L. W. Myers, architect, 13, Gray's Inn-square, W.C.1.

Regent-street.—Negotiations as to the design of the new premises to be erected adjoining those of the London Assurance Co. and County Fire Office are now in progress between the owners and H.M. Office of Woods and Forests. Messrs. Yates, Cook & Darbyshire, 43, Great Marlborough-street, W.1, and Mr. T. H. Smith, 17, Basinghall-street, E.C.2, joint architects.

Richmond.—It is proposed to carry out extensive alterations and improvements to the shops and showrooms in George-street owned by Messrs. Freeman, Hardy & Willis, Ltd., boot manufacturers.

Richmond.—A site in George-street and Red Lion-street has been purchased by Messrs. Edwards & James, Ltd., dairymen (branch of United Dairies, Ltd.), for the erection of a modern creamery and bottling depot. Mr. T. Dear, c-o United Dairies, Ltd., 34, Palace Court, W.2, architect.

Shoreditch.—A large office building is to be erected on a site at the corner of Wilson-street, E.C., as offices for Messrs. Maypole Dairy Co., Ltd. Messrs. Prestige & Co., Ltd., builders, Cambridge Wharf, Grosvenor-road, Westminster, S.W. Mr. W. A. Lewis, A.R.I.B.A., architect, 11–12, Finsbury-square, E.C.2.

Thames-side.—Messrs. Hampton & Sons, surveyors, 20, St. James's-square, S.W.1, are negotiating for a site on the Thames, with an area of 100 acres, upon which it is proposed to build an oil storage works.

Victoria-street.—As a section of a much larger scheme of rebuilding the old premises of the Army & Navy Co-operative Society, Ltd., Victoria-street, S.W.1, in Artillery Row and Spenser-place, S.W., are being demolished and new five-floored buildings erected. Messrs. Dove Bros., Ltd., builders, Cloudesley-place, Islington, N.1. Sir Aston Webb & Son, P.-P.R.A. and F.R.I.B.A., architects, Queen Anne's Gate, S.W.1. A considerable portion of the Victoria-street façade is to be modernised.

Walthamstow.—A block of new buildings, to cost about £3,500, is to be erected in Workhouse-road by Messrs. J. & J. Dear, Knott's Green-road, Walthamstow.

Waterloo-place.—A new West-End office is to be installed in the new building in Lower Regent-street, S.W.1, by the Banco Commerciala Italiana, the Italian State Railways, together with a tourist and steamship office. Messrs. Holland & Hannen and Cubitts, Ltd., builders, 258, Gray's Inn-road, W.C.; Mr. J. C. Christie, heating, 3, Mansell-street, E.1; Messrs, Francis Polden & Co., Ltd., electric lighting, 55, Cannon-street, E.C.4. Mr. Durward Brown, F.R.I.B.A., architect, 12, Regent-street, S.W.1.

Willesden.—New buildings are being erected at Park Royal, N.W.10, for the Park Royal Engineering Works, Ltd., in Cumberland-avenue. Mr. E. H. Burgess, builder, 45, Berners-street, W.1. Messrs. Peirson & Co., Ltd., steelwork, Lincoln House, High Holborn, W.C.2. Messrs. Hal Williams & Co., architects, 79, High Holborn, W.C.

Wimbledon.—An estate bounded by Kingston-road, Lower Downs-road, and Abbotts-avenue, S.W., is to be developed. A lay-out providing for 113 detached and semi-detached houses has been prepared by Mr. F. H. Skeens, 40, Athel-dene-road, S.W.18.

Wimbledon.—The Southern Railway Co.'s Construction Department are to carry out the entire reconstruction and modernisation of Wimbledon Railway Station, the cost of which is estimated at £250,000. Plans by Engineer's Office, Waterloo Station, S.E.1.

Wimbledon.—A large factory of five floors is to be built in Bygrove-road, S.W.19, to the plans of Mr. R. J. Thomson, architect, 49, Hill-road, Wimbledon, S.W. Messrs. A. & F. Leather, builders, 17, Victoria-street, Westminster, S.W.

Wimbledon.—A large county school for girls is to be erected near Wimbledon Common, at a cost of £22,000. Messrs. Jarvis & Richards, architects, 60, Tufton-street, Westminster, S.W. The Underground Company has placed a contract with Messrs. J. Jarvis & Son for the construction of South Wimbledon Station, on the new Morden Tube extension. A contract has also been placed with Messrs. The Foundation Co., Ltd., for the construction of Collier's Wood station.

RATES OF WAGES IN THE BUILDING TRADE

Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.

	Masons.	Brick-layers.	C'rp'ters. Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Lab'rers.
Aberdare	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Accrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Altrincham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashton-under-Lyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barnsley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barrow-in-Furness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bath	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bedford	1/6	1/6	1/6	1/6	1/6	1/9	1/8½	1/4
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/8	1/8	1/3½
Birmingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bishop Auckland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackburn	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackpool	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bolton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Bournemouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Bradford	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Brighton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bristol	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burnley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burton-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cardiff	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chatham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chelmsford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Chester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chesterfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Coventry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/3½
Darlington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Derby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Doncaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/3½
Durham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
E. Glam. (Mon. Vall.)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Eastbourne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Exeter	1/7	1/7	1/7	1/7	1/7	1/7	1/6	1/2½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Grays	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/3½
Grimsby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Great Yarmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Guildford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Halifax	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harrogate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hartlepools	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/0½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/1½
Hereford	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/3½
Huddersfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hull	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Ipswich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Lancaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/3½
Leeds	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leicester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Lichfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/3½
Lincoln	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/4
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/3½
Llanelly	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/4½
London { 12 m. radius	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/4
London { 12–15 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/3½
Loughborough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Maidstone	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Manchester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Mansfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Merthyr Tydfil	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Middlesbrough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newcastle-on-Tyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newport, Mon.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/1½
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Nottingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Oldham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Plymouth	1/8	1/8	1/8	1/8	1/8	1/8	1/7	1/3½
Pontypridd	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Rochester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rugby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
St. Albans	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
St. Helens	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sheffield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Shrewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
South Shields	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockton-on-Tees	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stoke-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Stroud	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5	1/3½
Sunderland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swansea	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Taunton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/2½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/1½
Tunbridge Wells	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Wakefield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/3½
Warrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
West Bromwich	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Wigan	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Wolverhampton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Worcester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/3½
York	1/8	1/8	1/8	1/8	1/8	1/8	1/8	

(For rates of wages in the Building Trade in Scotland, see page 342.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

★FEBRUARY 19.—**Rochester, Kent.**—DEMOLITION, &c.—For the demolition of existing buildings, Nos. 29 to 33, High-street, Rochester, and clearing the site for New Central Premises for the Rochester and District Co-operative and Industrial Society, Ltd. Society's Secretary, 25, High-street.

FEBRUARY 22.—**Avoca.**—CHURCH.—At Ferrybank, Avoca, for the Rev. Richard Connell, P.P. Foley & O'Sullivan, architects and civil engineers, Grafton Chambers, 102–103, Grafton-street, Dublin. Deposit £5 5s.

FEBRUARY 22.—**Belfast.**—REPAIRS.—For (1) repair to steps and landing at front entrance to county Courthouse, Belfast; (2) to reroof passage from entrance Hall to cross passage between back entrances, for the Antrim C.C. County Surveyor, County Courthouse, Belfast.

FEBRUARY 22.—**Blackpool.**—HOUSES.—Twenty-six houses in Hawes Side-lane, for the C.B. F. Wood, Borough Engineer and Surveyor. Deposit £1 1s.

FEBRUARY 22.—**Edinburgh.**—ADDITIONS.—For (1) excavator and concrete work at back of pennage at L.M. & S. Rly. sidings, Gorgie Markets; and (2) additional pennage at Gorgie Cattle Markets, for the T.C. E. J. MacRae, A.R.I.B.A., City Architect.

FEBRUARY 22.—**London District.**—ORDINARY WORKS AND REPAIRS.—To the buildings in their charge in the London District during the period of one year from April 1, 1926, for the Commissioners H.M. Office of Works, Contracts Branch, King Charles-street, London, S.W.1. Deposit £2 2s. (Cheques payable to the Commissioners.)

FEBRUARY 22.—**Liverpool.**—WALL.—Taking down and re-building front wall of houses, 6, 8 & 10, Greenland-street, for the T.C. Land Steward and Surveyor.

FEBRUARY 22.—**Manchester.**—HEATING.—Heating installation (low-pressure hot-water system) High-street depot, for the T.C. H. C. Lamb, Manager, Electricity Department. Deposit £1 1s.

FEBRUARY 22.—**Norwood Green.**—HOUSES.—Four houses at Norwood Green. G. R. Oddy, Chartered Architect, Ward's End-chambers.

FEBRUARY 22.—**Southampton.**—HOUSES.—Forty, 32, and 32 houses on the Burgess-road housing site, for the C.B. Borough Engineer. Deposit £2 2s.

FEBRUARY 23.—**Acton.**—ALTERATIONS.—Alterations to and the construction of a bathroom at the Day Nursery, Bello Bridge-road, for the B.C. Wm. Hodson, Town Clerk, Municipal Offices, Acton, W.3.

FEBRUARY 23.—**Dublin.**—ALTERATIONS.—Internal painting work and alterations, &c., at Tara-street baths and motor registration office, Castle-street, for the C.B. J. J. Murphy, Town Clerk.

FEBRUARY 23.—**Dublin.**—HOUSES.—Seventeen houses at Glenageary and three at Howth. Higginbotham & Stafford, architects, 3, Clare-street, Dublin.

FEBRUARY 23.—**Epsom.**—BUILDING.—Erection of additions to the Union Hospital and Nurses' Home, situate at Dorking-road, for the Guardians of the Epsom Union. A. C. Williams, Ashley-road. £2 2s.

FEBRUARY 23.—**Hartismere.**—COTTAGES.—Brome, 1 pair of cottages; Gislingham, 1 pair of cottages; Occold, 1 pair of cottages; Wyverstone, 1 pair of cottages; Bacton, block of 4 cottages; Cotton, 1 pair of cottages; Wetheringsett, block of 4 cottages; Thorndon, block of 3 cottages, for the R.D.C. Bernard Catchpole, Sanitary Inspector. Deposit £1 1s.

FEBRUARY 23.—**Hemsworth.**—CLOSET.—New water closet at Greenwell-lane, South Kirkby, for the R.D.C. W. T. Lynam, engineer and surveyor.

FEBRUARY 23.—**Jedburgh.**—BUILDING.—New Post Office, for H.M. Office of Works. Architect, H.M. Office of Works, 122, George-street, Edinburgh. Deposit £1 1s.

FEBRUARY 23.—**Littleborough.**—HOUSES.—20 houses, Calderbrook-road site, for the U.D.C. G. H. Wild, surveyor. Deposit £1 1s.

FEBRUARY 23.—**Manchester.**—BUILDING.—Permanent way and parcels depot, at Bennett-street, Hyde-road, for the T.C. City Architect. Deposit £2 2s.

FEBRUARY 23.—**Middlesex.**—HOUSES.—Erection of 20 upon three sites, for the Enfield U.D.C. Council's Surveyor, H. R. Crabb, M.Inst.C.E., Public Offices, Enfield. Deposit £2 2s.

FEBRUARY 23.—**Sedbergh.**—HOUSES.—Eight houses, for the R.D.C. A. Knewstubb, architect, St. Andrew's Chambers, Penrith.

FEBRUARY 23.—**Sefton.**—COTTAGES.—Six in Victoria-road, Ince Blundell, 12 in Runnell's-lane, Sefton, for the R.D.C. E. B. Bailey, architect, 9, Cook-street, Liverpool. Deposit £1 1s.

FEBRUARY 23.—**Watford.**—HOUSES.—Erection of 20 houses on the Wiggenhall estate, Watford, for the Corporation. W. W. Newman, A.M.I.C.E., F.S.I., Borough Engineer, Municipal Offices, 14, High-street Watford. Deposit £2 2s., payable to the Borough Treasurer.

FEBRUARY 24.—**Aberdare.**—PAINTING.—Internal plastering, painting, &c., at the Weights and Measures premises, Dean-street, for the Glamorgan C.C. W. E. R. Allen, Deputy Clerk of the C.C., Glamorgan County Hall, Cardiff.

FEBRUARY 24.—**Canterbury.**—HOUSES.—(1) Erection of 60 cottages at St. Martin's Hill site, built in pairs; (2) 20 parlour, together with two non-parlour type at Forty Acres site, built in pairs, for the City and County Borough of Canterbury. Either or both contracts may be tendered for. P. H. Warwick, City Surveyor, Municipal Buildings, Canterbury. Deposit £2 2s.

FEBRUARY 24.—**Dartford.**—LIGHTING.—For installation of electric lighting at the Upper Southern Convalescent Fever Hospital, and installation of electric lighting at the Joyce Green Fever Hospital, Dartford, Kent, for M.A.B. T. Cooper, Engineer-in-Chief. Deposit £1 each.

FEBRUARY 24.—**Essex.**—WALLS.—Retaining walls adjoining the main Newport-Clavering road in the parishes of Clavering and Wicken Bonhunt, for the C.C. William H. Morgan, chartered civil engineer, County Surveyor, Old Court, Chelmsford.

FEBRUARY 24.—**Glasgow.**—PAINTING.—Painter works required in connection with the Whiteinch baths, George-street, for the T.C. J. Lindsay, Town Clerk.

FEBRUARY 24.—**Leith, Edinburgh.**—REINFORCED CONCRETE WORK.—Provision and erection of a new grain warehouse and silos of reinforced concrete adjoining the East Quay of the Edinburgh Dock for the Leith Dock Commission. Alfred H. Roberts, M.Inst.C.E., Superintendent and Engineer, Dock Offices, Tower-place, Leith. Deposit £15, additional copy £2.

FEBRUARY 24.—**London.**—RECONSTRUCTION.—Of Sanitary annexe at Edmonton Epileptic Colony, Silver-street, Edmonton, N., for the M.A.B. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

FEBRUARY 24.—**Manchester.**—ALTERATIONS.—To Platt Hall, Platt-fields, for the T.C. City Architect. Deposit £1 1s.

FEBRUARY 24.—**Rhondda.**—BUILDING.—For (*a*) extension of the Ton Domestic Subjects Centre, and (*b*) temporary building for the Blaenycwm School, for the U.D.C. J. Rees, architect, Hillside Cottage, Pentre. Deposit, £2 2s.

FEBRUARY 24.—**Trim.**—ADDITIONS.—Alterations, additions, and renovations at the County Home, Trim, for the County Home. J. Mackey, surveyor, 58, Dame-street, Dublin. Deposit £2 2s.

FEBRUARY 24.—**Various Places.**—BUILDING, ALTERATIONS AND REPAIRS, FENCING, &c.—(1) Erection of engineer's cottage, Western Hospital, Seagrave-road, S.W.; (2) alterations and additions and cleaning, painting, and works of repair at St. Luke's Hospital, Lowestoft; (3) erection of new oak fencing at (*a*) Belmont Institution, Belmont, Surrey, (*b*) North-Western Hospital, Lawn-road, Hampstead, N.W.3, for the M.A.B. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

FEBRUARY 25.—**Marsden.**—HOUSES.—Six houses on the Wood's-avenue housing site, for the U.D.C.—Surveyor.

FEBRUARY 25.—**Shoeburyness.**—PREMISES.—Hall and premises, for the Order of Oddfellows. E. Read & Son, architects, 197, West-road. Deposit £1 1s.

★FEBRUARY 26.—**France and Belgium.**—HEADSTONES.—Total supply of 15,000 headstones, divided into a number of contracts, none of which shall be for less than 100 headstones. The Secretary, Works Department, Imperial War Graves Commission, 82, Baker-street, London, W.1, marked "Headstone Contract 5079-28."

★FEBRUARY 26.—**Hammersmith.**—TRANSFORMER HOUSE.—Construction of a transformer house at the electricity works, for the Metropolitan Borough of Hammersmith. F. Hill, Engineer and Manager, Electricity Department, 85, Fulham Palace-road, W.6.

FEBRUARY 26.—**Hawick.**—HOUSES.—Fourteen blocks of flatted houses at Oliver-park, for the T.C. A. Ingles, architect. Deposit £2 2s.

FEBRUARY 26.—**Hoyland.**—LIGHTING.—Installation of electric light at the school, for the West Riding E.C. A. Rayner, 151, Cross-hill, Ecclesfield near Sheffield.

FEBRUARY 26.—**Long Eaton.**—HOUSES.—Fourteen non-parlour houses in Wellington-street, for the U.D.C. H. Raven, architect. Deposit £5 5s.

FEBRUARY 26.—**Thornbury.**—ROOM.—Day room at the Poor Law Institution, for the B.G. F. W. Davies, surveyor, High-street.

FEBRUARY 26.—**Winchester.**—HOMES.—Two cottage homes at Nations Hill, Headbourne Worthy, near Winchester, for the B.G. Barnard & Carter, F. and L.R.I.B.A., architects, Southgate-street. Deposit £1 1s.

FEBRUARY 27.—**Belfast.**—FENCING.—Open rail fencing for harbour power stations, sub-stations, for the C.B. J. Wright, City Electrical Engineer and Manager, East Bridge-street. Deposit, £2 2s. each.

FEBRUARY 27.—**Chapel-en-le-Frith.**—PAINTING.—At the Poor Law Institution, for the B.G. L. Jagger, Clerk.

FEBRUARY 27.—**Cosford.**—COTTAGES.—Two pairs of cottages in Wattisham, for the R.D.C. E. Fincham, A.R.I.B.A., Marks Tey, Colchester.

FEBRUARY 27.—**Dodworth.**—PAINTING.—Painting and cleaning the interior of the Mechanics' Institute, for the Committee. Secretary.

FEBRUARY 27.—**Kilkhampton.**—SCHOOL.—New Council school, for the Cornwall E.C. B. C. Andrew, architect, New Inn Chambers, St. Austell. Deposit £1 1s.

★FEBRUARY 27.—**Milton Regis.**—HOUSES.—Erection of 24 (parlour-type) on the London-road site, for the U.D.C. A. W. Gallaway, Surveyor, Town Hall. Deposit £1.

FEBRUARY 27.—**Musselburgh.**—HOUSES.—48 houses at the housing site, Monktonhall-road, for the T.C. Burgh Surveyor.

FEBRUARY 27.—**Shuttlewood.**—REBUILDING.—Pulling down and rebuilding of the Co-operative stores, for the Oxcroft and District Co-operative Society, for the Society. H. Clayton, architect, 12, Corporation street, Chesterfield. Deposit £1 1s.

FEBRUARY 27.—**Wimbledon.**—HOUSES.—Plans specifications and estimates for the erection of 69 dwelling-houses on land fronting Durnsford-road, for the Corporation. Chairman of the Housing Committee, 12, Queen's-road, endorsed "Durnsford-road Houses."

MARCH 1.—**Cobh.**—HOUSES.—Sixteen houses at Newtown-road, Cobh (Queenstown), co. Cork, for the Irish Sailors' and Soldiers' Land Trust. Engineer, 30, Lower Fitzwilliam-street, Dublin. Deposit £2 2s.

MARCH 1.—**Doncaster.**—HOUSES.—Twenty-six houses in King's-road and Queen's-road, Askern, for the R.D.C. W. R. Crabtree, surveyor, Nether Hall.

MARCH 1.—**Dunmow.**—HOUSES.—Four at Crick's-green, Felsted; four at Little Dunmow; four at Great Bardfield, and four at Broxted, for the R.D.C. J. Plumbley, Sanitary Surveyor, 58, New-street.

★MARCH 1.—**Hammersmith, W.**—COTTAGES.—Construction (in brick) of 14 cottages and other incidental work on the Old Oak estate, Old Oak Common-lane, for the London County Council. Architect to the Council, The County Hall (Room No. 3), Westminster Bridge, S.E.1. Deposit £2 to the cashier.

MARCH 1.—**Keighley.**—CONVENIENCES.—Tramways shelter, public conveniences, &c., at Ingrow Bridge, for the T.C. Borough Architect. Deposit £1 1s.

MARCH 1.—**Middlesex.**—HOUSES.—Erection and completion on the Priory-road site, Hampton, for the U.D.C. Sidney H. Chambers, Surveyor to the Council, Public Offices, Hampton.

MARCH 1.—**Newport (Isle of Wight).**—WALL.—Reinforced concrete quay wall on the east side of the River Medina, for the T.C. E. A. Slater, Borough Surveyor.

MARCH 1.—**North Berwick.**—HOUSES.—Six blocks of four houses each, at East-road, for the T.C. A. Robertson, Burgh Surveyor.

MARCH 1.—**Par Station.**—HOUSE.—Residence at Tyward-heath, Par Station, Cornwall. A. J. Cornelius, F.R.I.B.A., architect, Truro.

MARCH 1.—**Warrington.**—ALTERATIONS.—Alteration to 6, Horse-Market-street, for the C.B. S. P. Silcock, architect, 6, Egypt-street. Deposit £1 1s.

MARCH 2.—**Barnstaple.**—ADAPTATION.—Of stables as a laundry at Hawley Tuberculosis Hospital, for the Devon C.C. Architect, 1, Blackall-road, Exeter.

MARCH 2.—**Belfast.**—SCHOOL.—New school, open shed, lavatories, &c., at Barrack-street, for the Christian Brothers. F. McArdle, architect and civil engineer, 29, Rosemary-street. Deposit, £5 5s.

MARCH 2.—**Bristol.**—POLICE AND FIRE BRIGADE PREMISES.—Erection of new premises, Bridewell-street, for the Watch Committee of the Council. Bernard & Sons, quantity surveyors, 26, Orchard-street, Bristol. Deposit £5 5s., payable to the City Treasurer.

MARCH 2.—**Maldon.**—HOUSES.—Six houses in pairs in Kelvedon-road, Wickham Bishops, for the R.D.C. Wm. Almond, surveyor, 6, Market-hill.

MARCH 3.—**Ongar.**—COTTAGES.—Four cottages at Stanford Rivers, for the R.D.C. P. Pearce, building surveyor. Deposit £1 1s.

★MARCH 3.—**Tottenham.**—HOUSES.—Erection of 76 houses, 26 shops, with dwellings over, and 8 garages, at the White Hart-lane housing scheme, for the Tottenham D.C. Three distinct prices: may be accepted separately or together as a lump sum. E. C. P. Monson, F.R.I.B.A., F.S.I., the Council's architect, Finsbury Pavement House, 120, Moorgate, London, E.C.2. Deposit £5.

MARCH 4.—**St. Thomas.**—HOUSES.—Four houses at Whimple, near Exeter, for the R.D.C. R. M. Challice & Son, architects and surveyors, 7, Bedford-circus, Exeter.

MARCH 5.—**St. Faith's.**—PAINTING.—Painting and repairing the outside of the Council's cottages in the undermentioned parishes: St. Faith's (2 sites), 8 houses; Hellesdon, 2 houses; Horsford, 8 houses; Felthorpe (2 sites), 4 houses; Wroxham (2 sites), 12 houses; Haynford, 4 houses; Sprowston (2 sites), 10 houses; Drayton, 8 houses; Spixworth, 4 houses; Frettenham, 4 houses; Horstead, 6 houses; Attlebridge, 6 houses; Lenwade, 6 houses; Alderford, 2 houses, for the R.D.C. C. Row, Clerk, 1, Redwell-street, Norwich.

MARCH 6.—**Kiveton Park.**—HOUSES.—Forty-six type "A" and four type "B" houses, at Station-road, for the R.D.C. J. Haslam, architect, Ryton Chambers, Bridge-street, Worksop. Deposit, £2 2s.

MARCH 6.—**Kiveton Park.**—HOUSES.—Forty-six type "A" and four type "B" houses, at Station road, for the Colliery Co., Ltd. J. Haslam, architect, Ryton Chambers, Bridge-street, Worksop. Deposit, £2 2s.

MARCH 6.—**Musselburgh.**—HOUSES.—Forty-eight houses at the housing site, Monktonhall-road, for the T.C. Burgh Surveyor.

MARCH 6.—**Salford.**—HEATING.—Heating, hot-water supply and ventilating installations at the Old People's Homes, Stott-lane, Pendleton, for the B.G. C. Swain, Architect, 12, Exchange-street, Manchester. Deposit £3 3s.

MARCH 8.—**Bucklow.**—HOUSES.—Eight parlour-type houses in pairs and twenty-two non-parlour type houses, for the R.D.C. R. Curtis Cordon, engineer and surveyor, 25, Station Buildings, Altrincham. Deposit £2 2s.

MARCH 8.—**Clutton.**—HOUSES.—Ten houses at Stanton Drew, for the R.D.C. Mr. Hawker, architect, Council Houses, Temple Cloud. Deposit £2 2s.

MARCH 8.—**Clutton.**—HOUSES.—Eight houses at East Harptree, for the R.D.C. Mr. Hawker, architect, Council Houses, Temple Cloud. Deposit £2 2s.

MARCH 8.—**Eastbourne.**—EXTENSION.—Erection, in steel or ironwork, of the extensions to the existing building at the Electricity Works, for the C.B. J. K. Brydges, Borough Electrical Engineer. Deposit 10s.

MARCH 8.—**Llanelly.**—HOUSES.—Forty-eight parlour type houses on the Llanerch site, for the T.C. Borough Surveyor. Deposit £2.

MARCH 9.—**Allerton Bywater.**—ADDITIONS.—Additions and alterations at Allerton Bywater, Lock-lane Council school, for the West Riding E.C. Education Department, County Hall, Wakefield.

MARCH 9.—**Armthorpe.**—SCHOOL.—New school at Armthorpe, near Doncaster, for the West Riding E.C. The Education Department, County Hall, Wakefield.

★MARCH 9.—**Brighton.**—HOUSES.—Erection of 28 houses in Freshfield-road, for the Borough Council. To either of the panel architects, Clayton & Black-10, Prince Albert-street; T. Garrett & Son, 34, Ship, street; E. Wallis Long, 6, Old Steine; W. H. Overton, 22, Ship-street. Deposit £1.

★MARCH 9.—**Colne, Lancs.**—POST OFFICE.—Erection of at Coln, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

MARCH 9.—**Sharlston.**—HOUSE.—Caretaker's house, for the West Riding E.C. Education Department, County Hall, Wakefield.

MARCH 9.—**South Hiendley.**—SCHOOL.—At South Hiendley, near Wakefield, for the West Riding E.C. Education Department, County Hall, Wakefield.

MARCH 10.—**Goole.**—BUILDING.—Waterworks Pumping Station at Pollington, for the U.D.C. E. J. Silcock, consulting engineer, 25, Victoria-street, Westminster. Deposit £5.

MARCH 12.—**Ainstable.**—GATE.—Lych gate at Ainstable. Rev. H. F. Tilbury, Ainstable Vicarage, Carlisle.

MARCH 12.—**Newark.**—BUILDING.—Electricity substation in connection with the proposed electricity sheme, for the T.C. H. Tallents, Town Clerk. Deposit, £1 1s.

MARCH 13.—**Wallasey.**—SCHOOL.—New school in Egerton-grove, Liscard, for the C.B. E. Kirby & Sons, F.R.I.B.A., architects, of 5, Cook-street, Liverpool. Deposit, £2 2s.

MARCH 18.—**Manchester.**—OFFICES.—General offices, mess room, &c., on the site of the new gasworks at Partington, for the T.C. Wm. Newbigging, consulting engineer, 5, Norfolk-street. Deposit, £2 2s.

NO DATE.—**Holbeck.**—CHURCH.—Church, Holbeck. E. Simpson & Son, architects, 12, Cunliffe-terrace, Manningham, Bradford.

NO DATE.—**Horsforth.**—CHURCH.—E. Simpson, & Son, architects, 12, Cunliffe-terrace, Manningham Bradford.

NO DATE.—**Leeds.**—CLUB.—Working Men's Club, Kirkstall, Leeds. F. Mitchell & Sons, architects and surveyors, 9, Upper Fountains-street, Albion-street.

★NO DATE.—**Tewkesbury.**—HOUSE.—Erection and completion of No. 1 House, probably 10 houses, development of Gubshill Manor Estate. F. W. Watson, F.A.I.A., South Cambray House, Cheltenham, or A. R. Orchard, Gubshill, Tewkesbury. Deposit £1 1s.

NO DATE.—**Wrenthorpe.**—HOUSES.—Thirty-seven houses at Bradford-road, Wrenthorpe, near Wakefield, for the Stanley U.D.C. J. D. Macleod, architect, 4, Frenchgate, Doncaster.

MATERIALS, etc.

FEBRUARY 22.—**Hailsham.**—MATERIALS.—2 in granite and 2 in. limestone, and 2½ in. tarred macadam and chippings and flints, for the R.D.C. G. B. Fairchild, surveyor, Compton-terrace.

FEBRUARY 22.—**Harrogate.**—MATERIALS.—Cement, slag, York stone flagging, kerb, and setts, concrete, or artificial stone flags and kerb, tar and tar compounds, sanitary pipes, for the T.C. C. E. Rivers, Borough Engineer.

FEBRUARY 22.—**Maldens and Coombe.**—MATERIALS.—Refined tar, broken road metal, kerbing and gravel, stoneware goods, tar-macadam and tar-paving, Portland cement, lime, for the U.D.C. J. Wm. Johnson, Clerk of the Council.

FEBRUARY 22.—**Newark.**—MATERIALS.—1,120 tons of tarmacadam, 650 tons of granite, and 2,030 tons of slag, for the R.D.C. R. Oakden, District Surveyor, 27, Winchilsea-avenue.

FEBRUARY 22.—**Pontefract.**—MATERIALS.—Granite chippings, dry slag chippings, and tar macadam, for the T.C. W. H. Newton, Borough Engineer.

FEBRUARY 22.—**Rawtenstall.**—MATERIALS.—Road metal, earthenware pipes, gullies, pitch, creosote oil, Portland cement (British), iron castings, stone flags, setts, for the T.C. Borough Surveyor.

FEBRUARY 22.—**Penarth.**—MATERIALS.—Mountain limestone road metalling and gravel and basalt or granite gravel, for the U.D.C. I. Evans, surveyor.

FEBRUARY 22.—**Steyning West.**—MATERIALS.—850 tons of 2½ in. granite; 600 tons of ¾ in. granite chippings; 350 tons of 1½ in. stone, for the R.D.C. C. H. Wright, surveyor.

FEBRUARY 22.—**Woodford.**—MATERIALS.—Broken granite, chippings and dust, limestone chippings and dust, tar, pitch, tarmacadam, gravel, hoggin, and sand, for the U.D.C. A. D. Ward, engineer and surveyor.

FEBRUARY 23.—**Barton-upon-Humber.**—MATERIALS.—Tarred slag, broken slag, shingle, refined tar, for the U.D.C. C. G. Else, surveyor.

FEBRUARY 23.—**Doncaster.**—MATERIALS.—Tar macadam, broken slag, whinstone chippings, &c., for the R.D.C. W. R. Crabtree, surveyor, Nether Hall.

FEBRUARY 23.—**Hadleigh.**—MATERIALS.—17,000 galls. of tarvia or other tar compound, 500 to 600 tons 1½ in. to 2 in. Guernsey or Quenast granite, 50 tons 1 in. Guernsey or Quenast granite, 90 tons clean ¾ in. Guernsey or Quenast granite chippings, 500 tons concrete hard core for road foundations, 260 tons ¾ in. to ¾ in. graded tarred slag toppings, 560 tons 2½ in. to 1 in. graded tarred slag, 5,280 sq. yds. grouting with tarvia or bitumen, Council providing roller and chippings, 5,280 sq. yds. tarvia or bitumen spraying complete, for the U.D.C. H. W. F. Grimwade, Clerk.

FEBRUARY 23.—**Hazel Grove and Bramhall.**—MATERIALS.—Stone, chippings, and other materials for highway purposes, for the U.D.C. Surveyor.

FEBRUARY 23.—**Salford.**—MATERIALS.—Granite setts, &c., flags and curbs, curb edging, concrete flags limestone chippings, stone chippings, tar macadam, pitch and creosote oil, cement, iron castings, earthenware pipes, for the C.B. Borough Engineer.

FEBRUARY 24.—**Calstor.**—MATERIALS.—Supply of granite, slag, gravel, chips, &c., for the R.D.C. G. Riley, surveyor, Legsby-road, Market Rasen.

FEBRUARY 24.—**Chertsey.**—MATERIALS.—Tar and tar compounds, hardcore, sand and shingle, for the R.D.C. Capt. H. Beeney, Surveyor's Office, West Byfleet.

FEBRUARY 24.—**Clayton-le-Moors.**—MATERIALS.—Granite, lonky and grit setts, flags, kerbs, granite macadam and chippings, tarred granite, limestone, or slag, limestone chippings, sanitary pipes and tar, for the U.D.C. A. Dodgeon, surveyor.

FEBRUARY 24.—**Dunmow.**—MATERIALS.—Broken granite, pit gravel, for the R.D.C. P. E. Furlong, Highway Surveyor, 58, New-street.

FEBRUARY 24.—**London.**—MATERIALS.—Jobbing mason and pavior's work, asphalte paving work, broken granite and chippings, flints, ballast, shingle, &c., iron and ironmongery, plumber's work, sewer ironwork, for the Hackney B.C. Borough Engineer and Surveyor. Deposit £1 1s. each.

FEBRUARY 24.—**Ramsgate.**—FLINT.—Crushed flint, for the T.C. T. G. Taylor, Borough Engineer.

FEBRUARY 24. — **Sutton.** — MATERIALS. — Road materials, &c., ironmongery, paint, oil, &c., for the U.D.C. H. Bolton, Clerk.

FEBRUARY 24. — **Twickenham.** — MATERIALS.— Broken granite and granite chippings, ballast, shingle, flints, gravel and sand, granite kerb, channel and quadrants, granite cubes and setts, Portland cement, street gullies and drain pipes, tar slag macadam, Kentish, rag tar, paving, artificial stone paving, distilled tar, for the U.D.C. F. W. Pearce, surveyor.

FEBRUARY 24.—**Worsley.** — MATERIALS. — Tarred macadam, tarred chippings, granite setts, chippings Lonkey kerbs, stoneware pipes, pitch and creosote, concrete flags, cement, for the U.D.C. J. Howard, surveyor, Town Hall, Walkden.

FEBRUARY 25.—**Durham.**—MATERIALS.—(*a*) Slag and tar-macadam, (*b*) the re-surfacing with tar-macadam, and (*c*) the surface tarring, for the R.D.C. Geo. Gregson, Surveyor, 38, Saddler-street.

FEBRUARY 25.—**Hampton.**—MATERIALS.—¼ in. pea shingle or clean grit suitable for covering tarred roads, limestone tar-paving materials, tarred slag macadam, distilled tar, tarvia, or other compounds, granite kerbing, for the U.D.C. S. H. Chambers, Surveyor.

FEBRUARY 25.—**Northallerton.**—MATERIALS.—Slag, limestone, whinstone, tarmacadam, tar, bitumen, and pitch, for the U.D.C. E. O. Hillyard, Surveyor.

FEBRUARY 25.—**Watford.**—MATERIALS.—Ironwork, pipes, bricks, &c., for the T.C. W. W. Newman, Borough Engineer.

FEBRUARY 25.—**Wetherby.**—MATERIALS.—Clean slag, tarred slag, granite, whinstone, broken limestone, cob limestone, and tarred limestone, and refined tar, for the R.D.C. A. Suttel, surveyor.

FEBRUARY 26.—**London.**—HEADSTONES.—For the British Military Cemeteries in France and Belgium, for the Imperial War Graves Commission. The Secretary, Works Department, Imperial War Graves Commission, 82, Baker-street, W. 1.

FEBRUARY 26.— **Melford.**— MATERIALS.— Broken granite, slag, and flint or stone, for the R.D.C. A. F. Kilner, surveyor, 7, Gainsborough-street, Sudbury.

FEBRUARY 26.—**Merton and Morden.**—MATERIALS.—Broken granite, grit for road surface tarring work, tar, stoneware pipes, sewerage ironwork, Portland cement, tarmacadam, for the U.D.C. C. J. Mountfield, Clerk, 126, Kingston-road, Merton, S.W.19.

FEBRUARY 26.—**Southend-on-Sea.**—MATERIALS.—Stoneware pipes and fittings, tarpaving and tarmacadam, iron castings, granite kerb and channel, broken Guernsey granite, broken granite and furnace slag, bituminous compounds, tar, pitch, and creosote oil, for the C.B. R. H. Dyer, Borough Engineer.

FEBRUARY 27.—**Broadstairs and St. Peter's.**—MATERIALS.—Dehydrated tar, crushed pebble, granite chippings, for the U.D.C. H. Hurd, surveyor.

FEBRUARY 27.—**Cardiff.** — MATERIALS. — Mountain limestone and tarred nut stone and gravel, for the R.D.C. W. Farrow, surveyor, 20, Park-place.

FEBRUARY 27.—**Chelmsford.**—MATERIALS.—Washable distemper and ceiling distemper, for the T.C.—E. J. Miles, Borough Engineer and Surveyor.

FEBRUARY 27.— **Earby.**— MATERIALS.— Granite, limestone, tarred slag, and refined tar, &c., for the U.D.C. L. H. Poole, surveyor.

FEBRUARY 27.—**Eastbourne.**—MATERIALS.—Broken granite, Kentish rag, Mendip or other limestone, tarmacadam, broken and unbroken flints, granite or other stone chippings, refined tar, bitumen and compounds, for the R.D.C. W. Walker, District Surveyor, 3, Bedford-grove.

FEBRUARY 27.—**Hambledon (Surrey).**—MATERIALS.—Granite, limestone, and tar-macadam, tar or tar compounds, for the R.D.C. S. B. Hasell, Surveyor's Office, High-street, Bramley, near Guildford.

FEBRUARY 27.—**Harrow-on-the-Hill.**—MATERIALS.—Granite chippings, tarmacadam (slag or granite), limestone tarpaving, clean shingle, distilled tar or tar compounds, for the U.D.C. J. P. Bennetts, engineer and surveyor.

FEBRUARY 27.—**Portland.** — MATERIALS. — Broken granite, for the U.D.C. R. Davison, engineer and surveyor.

FEBRUARY 27.—**Thornaby-on-Tees.**—MATERIALS.—Dry slag, tarred slag macadam, whinstone, sewer pipes, smith work, cement, ironfounders' work, tar, concrete flags, kerb, &c., for the T.C. G. H. Connor, Borough Engineer.

FEBRUARY 27.—**Westhampnett.**—MATERIALS.—15,366 tons of road material, and 7,485 cubic yds. of local material, for the R.D.C. A. W. Shorland, Surveyor of Highways, Council Offices, Pallant House, Chichester.

FEBRUARY 27 — **Westhampnett.** — TAR. — Tar, and bitumen mixture and bitumen (approximate quantity required 155,000 galls.), and for various works of tar grouting and tar spraying, for the R.D.C. A. W. Shorland, Surveyor of Highways.

MARCH 1.—**Battersea.**—STORES AND MATERIALS.—Tenders are invited from contractors and others for materials and stores for the Borough Council. The Clerk, Town Hall, Lavender Hill, S.W.11.

MARCH 1.—**Bredbury and Romiley.**—MATERIALS.—Granite macadam and chippings (tarred and untarred), slag macadam and chippings (tarred and untarred), limestone macadam (tarred and untarred), tar compounds, stone and cement kerbs, flags, and setts, granite setts, ironwork (gulleys, street grids, manhole covers, &c.), sanitary pipes, Portland cement, disinfectants, for the U.D.C. S. Axon, Clerk to the Council, Council Offices, George-lane, Bredbury, near Stockport.

MARCH 1.—**Ealing.**—MATERIALS.—Cement, limes and pipes, slablaying, granite chippings, limestone tarpaving, tarred macadam and tarpainting roads, tar, ironmongery, iron castings, for the Ealing B.C. W. R. Hicks, Borough Surveyor.

MARCH 1.—**East Retford.**—MATERIALS.—Broken slag, slag screenings, and tar, for the R.D.C. J.Turrill, surveyor, 31, Market-place.

MARCH 1.—**Hertfordshire.**—TAR.—Refined tar, for the C.C. Lieut.-Col. A. E. Prescott, county surveyor, Hatfield, Herts.

MARCH 1.—**London.**—MATERIALS.—Artificial stone paving, repairs to asphalte footpaths, iron castings, cement, lime, bricks and firebricks, tarred ragstone, tar spraying roads, tarred slag, timber, granite, flints and ragstone, stoneware goods, Thames ballast, sand and shingle, &c., for the Lewisham B.C. J. W. Shuter, Town Clerk, Town Hall, Catford.

MARCH 1.—**London.**—MATERIALS.—Ballast and sand, carriageways and footway repairs (asphalte), carriageway repairs (macadam), carriageway repairs (granite sett pavement), carriageway repairs (wood pavement), cement and lime, flags (sandstone and artificial), footway and channel (masons' work) granite setts kerb and channels, gullies (stoneware) construction, painters' materials and miscellaneous oils, sewerage and drainage (minor works), wood paving blocks, for the Westminster City Council. J. Hunt, Town Clerk, City Hall, Charing Cross-road, W.C.2.

MARCH 1.—**Middlesbrough.**—MATERIALS.—Annealed scoriae (broken), bricks, castings, concrete flags and kerbs, pitch and tar, sanitary pipes, gulleys, junctions, &c., slag (broken), tarred whinstone and slag, timber, whinstone and granite (broken), whinstone and granite setts and kerbs, for the C.B. S. E. Burgess, M.Inst.C.E., Borough Engineer.

MARCH 1.— **Smethwick.** — MATERIALS. — Bricks, cement, lime, granite for roadmaking, granite chippings, slag, kerb, setts, castings, stoneware pipes, for the C.B. R. Fletcher, Borough Engineer and Surveyor.

MARCH 1.—**Sunbury-on-Thames.**—MATERIALS.—Refined tar, tarmacadam, tarpaving and ½in. clean shingle, for the U.D.C. H. F. Coales, engineer and surveyor.

MARCH 1.—**Wellingborough.** — MATERIALS. — Best Leicestershire granite, 2 in. and 1½ in. gauge; granite kerb; best granite, ¾ in., ½ in., ⅜ in. and ¼ in. chippings; granite, 1½ in., treated with "Bi-tarco"; best hard limestone, 2 in. and 1½ in.; best hard limestone, ½ in. and ¾ in. chippings; stoneware pipes and gullies; patent paving slabs; Crich or Buxton lime; best broken slag, 2½ in., 1½ in. and 1 in.; best ½ in. screened slag chippings; best slag, 2½ in. and 1½ in., treated with "Bi-tarco"; best slag, 2½ in. and 1½ in., mixed with refined tar, for the U.D.C. R. Stevenson Henshaw, engineer and surveyor.

MARCH 1.—**Wrexham.**—MATERIALS.—Macadam, setts, kerbs, channels and flags, chequered tiles, earthenware pipes and gullies, cement and lime, iron castings, sanitary materials and disinfectants, and timber, for the T.C. Borough Surveyor, 1, Grosvenor-road.

MARCH 2.—**Leeds.**—MATERIALS.—Bitumen (surface dressing), sand, gravel, tar, Yorkshire flags, setts and kerb, concrete flags, broken granite or whinstone macadam stone (2 in. to 2½ in. gauge), ½ in. to dust limestone, 3 in. to 5 in. rough dross, ½ in. and 1 in. tarred slag, reinforcing fabric, quick-setting cement, for the T.C. E. W. Cockerlyne, Engineer, 1, Swinegate.

MARCH 2.—**Leeds.**—MATERIALS.—Plumber materials, Portland cement, bitumen compound, sand, gravel, quick-setting cement, for the T.C. W. Chamberlain, General Manager, 1, Swinegate.

MARCH 2. — **Smallburgh.** — MATERIALS. — Flints (broken to pass 2 in. gauge, and free from silt), granite, marl beach stones (hand picked), clay, for the R.D.C. W. L. Lewis, District Surveyor, Stalham.

MARCH 3.—**Bridlington.**—MATERIALS.—1,000 tons of whinstone, 1,000 tons of tarred slag, 2,500 tons of dry slag, 1,500 tons of slag and whinstone chips, for the R.D.C. J. Haggitt, District Surveyor, 42, Marshall-avenue.

MARCH 3.—**Goole.**—MATERIALS.—Granite macadam, slag, bituminous macadam, concrete flags, concrete kerb, concrete channel, stoneware pipes, Portland cement, gravel and sand, refined tar or bituminous compound, for the U.D.C. J. H. Castle, engineer and surveyor.

MARCH 3.—**Hollingbourne.**—MATERIALS.—Road materials, including tar-macadam, granite and tar, or other surface dressing, for the R.D.C. F. Miskin, Clerk, 33, Earl-street, Maidstone,

MARCH 3.—**Richmond (Yorks).**—MATERIALS.—Whinstone and slag, also for leading stones for the roads, for the R.D.C. T. W. Beadle, surveyor, North Cowton, Darlington.

MARCH 3.—**Warwickshire.**—MATERIALS.—Broken stone, slag, tar-macadam, &c., for the C.C. D. H. Brown, County Surveyor, 8, Northgate-street, Warwick.

MARCH 4.—**Hemsworth.** — MATERIALS. — Broken whinstone, granite, limestone, slag, slag chippings, and tar-macadam, etc., for the R.D.C. W. T. Lynam, Surveyor.

MARCH 4.—**Nottingham.**—MATERIALS.—Cement, blue lias lime, red bricks, blue bricks, timber, stoneware pipes, &c., stoneware pipes, &c. (patent joints), iron castings, iron gulleys, &c., Yorkshire flags, kerb, &c., granite setts, kerb and broken granite, ironstone slag, chippings, &c., river gravel, concrete sewer tubes, picks, shovels, scoops, &c., limestone chippings, refined tar, for the T.C. T. Wallis Gordon, City Engineer and Surveyor. Deposit 5s. each.

MARCH 5.—**Rye.**—MATERIALS.—Stone, tarring grit, beach, and tar, for the R.D.C. R. E. Fuller, District Surveyor, Chitcombe-road, Brede.

MARCH 6.—**Denbighshire (Eastern Division).**—MATERIALS.—Road stone and chippings, tarred granite macadam, and tarred slag, distilled tar, &c., kerbing, for the C.C. E. W. Jones, County Surveyor, Roads and Bridges, Wrexham.

MARCH 6.—**East Grinstead.**—MATERIALS.—Broken granite, granite chippings, tar-macadam, ragstone, flints, and surface tarring, for the U.D.C. H. Campbell Golding, Acting Surveyor and Engineer.

MARCH 8.—**Claypole.**—MATERIALS.—1,750 tons of granite, 1,500 tons of slag, 200 tons of footpath gravel, 1,500 tons of slag tar-macadam, and for tar-spraying about 100,000 sq. yds. of road, for the R.D.C. T. W. Mawer, District Surveyor, Brant Broughton, Newark.

MARCH 8.—**Derby.**—MATERIALS.—Bricks, cement and lime, earthenware, freestone, gritstone, &c., granite, &c., gravel, sand, &c., limestone, paints, oils, &c., tar, &c., slag, for the C.B. C. A. Clews, Borough Surveyor.

MARCH 8.—**Godstone.**—MATERIALS.—Road materials, including slag, granite, limestone and tar-macadam, tar, tar compounds, and surface treatment, liquids, Sevenoaks stone, tar grit, sand and ballast, and tar-spraying, for the R.D.C. G. E. Crowter, engineer and surveyor.

MARCH 9.—**Winchester.**—MATERIALS.—Gravel and sand, Portland cement, stoneware pipes, and cement paving slabs, for the T.C. W. V. Anderson, City Engineer.

MARCH 10.—**London.**—MATERIALS.—Asphalte, patent or manufactured paving stone, broken granite, ballast, hoggin, shingle and sand, lime and cement, for the Shoreditch B.C. R. C. Ray, Deputy Town Clerk, Shoreditch Town Hall, Old-street, London, E.C. 2.

MARCH 10.—**Long Eaton.**—MATERIALS.—Tar macadam, granite, slag, gravel refined tar, cement, kerb (granite, York, and concrete), concrete slabs, common bricks, stoneware pipes, concrete pipes, cast iron pipes, for the U.D.C. H. Raven, C.E., surveyor.

MARCH 10.—**Shifnal and Blymhill.**—MATERIALS.—Granite, slag, and tar, for the R.D.C. C. H. Hines, surveyor, Market-square.

MARCH 15. — **Northamptonshire.** — MATERIALS. — Tarred macadam, broken granite, tar, surface dressing of various main roads in the county, for the C.C. E. A. Black, County Surveyor, County Hall, Northampton.

MARCH 24.—**Wortley.**—MATERIALS.—Macadam, tar and pitch, kerbs, iron castings, sanitary pipes, for the R.D.C. F. Thurlby, engineer and surveyor, Grenoside, near Sheffield.

NO DATE.—**Aberdare.**—MATERIALS.—Steel girders, channels and rails, timber, lime and cement, for the Powell Duffryn Steam Coal Co. Stores Manager, Aberaman Offices, Aberdare.

ENGINEERING, IRON AND STEEL.

FEBRUARY 22.—**Aberdeen.**—STEELWORK.—290 tons of structural steelwork, corrugated iron sheeting, &c., forming an extension of the boilerhouse at their Ferryhill power station, for the T.C. The City Electrical Engineer, Millburn-street, Aberdeen. Deposit £2 2s.

FEBRUARY 22.—**Lindsey.**—BRIDGE.—Reinforced concrete bridge at Pilfrey, Isle of Axholme, for the C.C. A. G. Bradshaw, County Surveyor, Newland House, Lincoln. Deposit £2 2s.

FEBRUARY 23.—**Manchester.**—STEELWORK.—At the permanent way and parcels depot, Bennett-street, Hyde-road, for the T.C. City Architect. Deposit £1 1s.

FEBRUARY 23.—**Watford.**—ENGINEERING WORK.—Laundry machinery, water softener, electric lighting, central heating plant in sections at the Institution, 60, Vicarage-road, for the Guardians of the Watford Union. Masters' Office at the Institution, or at the Consulting Engineer's Office, 39, Carlton-road, Putney, S.W.15. Deposit £2 in notes for each section.

FEBRUARY 24.—**East Lothian.**—BRIDGE.—New steel bridge over the River Tyne on the East Linton by-pass road, for the C.C. P. Clarke, Surveyor. Dunbar Deposit £3 3s.

FEBRUARY 24.—**Stebbing.**—RECONSTRUCTION.—Reconstruction of Stebbing bridge, carrying the main road from Braintree to Dunmow, over the Stebbing Brook, in the parishes of Stebbing and Little Dunmow, for the Essex C.C. W. H. Morgan, Chartered Civil Engineer, Old Court, Chelmsford.

FEBRUARY 26. — **Birmingham.** — VALVES. — Sluice valves and ironwork in connection with the Bartley reservoir, for the T.C. F. W. Macaulay, Chief Engineer. Deposit, £1 1s.

FEBRUARY 26.—**Skegness.**—TOWER.—Construction of a reinforced concrete water tower, adjoining the Council's existing Pumping Station, for the U.D.C. W. Bridges & Co., 37, Parliament-street, Westminster, S.W.1. Deposit, £5.

FEBRUARY 27.—**Glasgow.**—ROAD. — Raising the height of the stone pitching protecting the banks of the Loch at Strone Wood, in building retaining walls, and in constructing part of a new road at a higher level than the former road along the north side of Loch Katrine, including the construction of one bridge with ironwork complete and all accessory works relating to the above operations. The contract involves about 4,600 cubic yds. of excavation in rock and soft, 1,840 cubic yards of pitching, and 580 cubic yds. of rubble retaining walls. Material for pitching is to be mostly obtained by lifting old dry built pitching from certain places on the north shore of the Loch, for the T.C. J. R. Sutherland, engineer and manager, Water Department, 50, John street. Deposit, £2 2s.

FEBRUARY 27.—**Stow.**—FILLING.—1,200 cube yards of suitable filling, such as dry soil, gravel, or the like, for the approaches to Stow Bridge, for the Norfolk C.C. S. H. Warren, County Surveyor, 9, Queen-street, Norwich.

MARCH 1.—**Scarborough.**—RESERVOIR.—Concrete Service Reservoir on Spring Hill, for the C.B. Dr. H. Lapworth, 25, Victoria-street, Westminster. Deposit £5.

MARCH 2.—**Dublin.**—TUNNEL.—Under the River Liffey, for the C.B. J. Murphy, Town Clerk. Deposit £1 1s.

MARCH 2.—**Kenfig Hill.**—RESERVOIR.—Construction of a reinforced concrete service reservoir at Kenfig Hill, together with the necessary cast-iron pipes, valves and other fittings, for the Mid-Glamorgan Water Board. Thomas & Morgan & Partners, civil engineers, Pontypridd. Deposit £10 10s.

MARCH 3.—**Belper.**—BRIDGE.—Construction of a ferro-concrete bridge at Ford-lane, Allestree, near Derby, for the R.D.C. R. C. Cordon, surveyor.

MARCH 4.—**Abersoch.**—RESERVOIRS.—Construction of storage reservoir, pumping station, service reservoir, the provision and laying of about three miles of 4 in. and 3 in. diameter cast iron mains, and contingent works at Abersoch, Carnarvonshire, for the Water Supply Co. S. B. Wilmot and A. H. S. Waters, engineers, 63, Temple Row, Birmingham. Deposit, £1 1s.

MARCH 9.—**Edinburgh.**—RAILS.—1,200 tons of steel tramway rails, for the T.C. Tramways Manager, 2, St. James's-square.

MARCH 15.—**Grimsby.**—BRIDGE.—Lifting bridge over the Alexandra Dock at Grimsby, about 45 ft. span and 50 ft. in width, together with 240 lineal feet of viaduct 50 ft. in width, for the C.B. H. Gilbert Whyatt, Borough Engineer. Deposit £10 10s.

MARCH 15.—**Stockport.**—EXTENSIONS.—Construction of screening chambers, pump-house, detritus tanks, and other appurtenant works, including mechanical equipment, at the Stockport Sewage Works, Cheadle Heath, for the C.B. H. Hamer, Borough Surveyor. Deposit £5 5s.

ROAD, SEWERAGE, AND WATER WORKS.

FEBRUARY 22.—**Chester.**—ROAD.—Construction of the necessary road and sewerage works in connection with the Handbridge housing scheme, for the T.C. C. Greenwood, City Engineer and Surveyor. Deposit £2 2s.

FEBRUARY 22.—**Coulsdon and Purley.**—SEWER.—Laying of approximately 150 lineal yds. of 9 in. soil sewer and necessary manholes, &c., between Godstone-road and Valley-road, Kenley, for the U.D.C. R. Chart, Surveyor, 69, Brighton-road, Purley.

FEBRUARY 22.—**Guildford.**—WIDENING.—Of Milford-lane, for the R.D.C. John Anstee, engineer and surveyor.

FEBRUARY 22.—**Knutsford.**—SEWERS.—Laying about 8,900 lin. yds. of 27 in., 24 in., 21 in., 18 in., 15 in., 12 in., 9 in. and 6 in. sewers, with the necessary manholes, flushing chambers and storm overflow; bridge over brook; taking up and relaying certain existing sewers; sewer crossings under railway; the construction of screening chambers, detritus tanks, gauge basin, hydrolytic tanks, dosing chamber, percolating filters, humus tanks, stormwater tanks, sludge drying beds, diversion of brook course, fencing and laying out of land for irrigation at Birkin Brook, Mobberly, for the U.D.C. Taylor & Wallin, engineers, Commercial Union Buildings, 47, Pilgrim-street, Newcastle-on-Tyne. Deposit £5.

FEBRUARY 22.—**London.**—SEWER.—Laying 400 ft. of 12 in. glazed stoneware pipe sewer and constructing three manholes in Sun-street and Finsbury-square, for the Finsbury B.C. Borough Surveyor, Town Hall.

FEBRUARY 22.—**Lytham Saint Anne's.**—SEWER.—Construction of about 2 miles of 48 in. diameter reinforced concrete main intercepting sewer and about ¾ of a mile of 54 in. cast-iron main outfall sewer, together with manholes, ventilating shafts, and other appurtenant works, for the T.C. G. W. Lawson, Borough Engineer and Surveyor. Deposit £5.

FEBRUARY 22.—**Manchester.**—SEWERING.—Sewering, draining, paving (with concrete), flagging (with artificial flags), &c., Dyson-street, Newton Heath, from James-street to a point 75 yards distant in a north-westerly direction, and draining, paving (with concrete, &c.), passage behind 1–23, Leo-street, and 7, Aden-street and adjoining 1, Leo-street, Ardwick, passage behind 2–8, Leo-street, and 17–23, Limebank-street, and adjoining 2, Leo-street, and 23 and 25, Limebank-street, Ardwick, for the T.C. P. M. Heath, Town Clerk. Deposit £1 1s.

FEBRUARY 23.—**Dunfermline.**—SEWER.—Construction of about 700 lineal yards of brick-built main outfall sewer, chiefly in tunnel, from a point west of Elgin Bleachworks to Bothwell-street, for the T.C. Crouch & Hogg, C.E., 17, Lynedoch-street, Glasgow. Deposit £2 2s.

FEBRUARY 23.—**Pontefract.**—WORKS.—Certain street works in Anderson-street, back Anderson-street East, back Anderson-street North-West, back Anderson-street South-West, Victoria-street, back Victoria-street, and back Front-street, for the T.C. Borough Engineer. Deposit £2 2s.

FEBRUARY 24.—**Penarth.**—IMPROVEMENTS.—Private improvement (street) works in Baron-road, Baroness-place, Baron-lane, Baroness-lane, Clinton-road, and Cwrt-y-vil-road, and Cwrt-y-vil-road (Lower), for the U.D.C. E. I. Evans, surveyor.

FEBRUARY 24.—**Rawmarsh.**—ROAD.—**Forming a new 80 ft. wide roadway, a new low-level roadway, also kerbing, channelling, and flagging, &c., surface water drainage, manholes, and gullies; the excavation of about 180,000 cubic yards of material through a hill, and depositing in the adjoining valley of Warren Vale, to form new road gradients, and erection of a reinforced concrete bridge and culverts, and incidental work, for the Rawmarsh U.D.C. and the Swinton U.D.C. J. A. Tonge, Engineer to the Rawmarsh U.D.C., Council Offices, Parkgate. Deposit £3.**

FEBRUARY 24.—**Swinton.**—CONVERSIONS.—Privy conversions in Frederick-street, Wath-road, Cowood-street, and White Lee-road, Roman-terrace, for the U.D.C. E. Adams, Sanitary Inspector. Deposit £1 1s.

FEBRUARY 24.—**Twickenham.**—IMPROVEMENT.—Widening, forming, levelling, sewering, kerbing, paving and making good of a portion of St. Margaret's-road, for the U.D.C. F. W. Pearce, Surveyor. Deposit £1 1s.

FEBRUARY 27.—**Bradfield.**—REPAIRS.—At Bucklebury, Stanford Dingley, Bradfield, Aldermaston, Padworth, Ufton, Beech Hill, Mortimer, Beech Hill, for the R.D.C. C. Ford, Highway Surveyor, Station-road, Theale, Berks.

FEBRUARY 27.—**Cumberland.**—TARRING.—Surface tarring of part or the whole of approximately 600,000 sq. yds. of main roads, with refined tar or other approved compound, for the C.C. G. O. Lockwood, Chartered Civil Engineer, County Surveyor, The Courts, Carlisle.

MARCH 1.—**Beckenham.**—WIDENING.—Of South Eden Park-road, for the U.D.C. J. A. Angell, Surveyor. Deposit £2.

MARCH 1.—**Doncaster.**—SEWERAGE.—Construction of additional sludge lagoons at the Sandall Purification Works, for the T.C. F. Oscar Kirby, Borough Engineer, 2, Priory-place.

MARCH 1.—**Down.**—RECONSTRUCTION.—Reconstruction Lisburn, Hillsborough road, and reconstruction of portions of Belfast-Comber road, for the C.C. J. G. Wilkin, County Surveyor, Courthouse, Downpatrick.

MARCH 1.—**Kilkenny.**—PIPE.—Provision, laying, and jointing of a 9 in. internal diameter cast iron pipe line of a total length of about 10,000 yd. from the Impounding Reservoir at Muckalee to the Service Reservoir at Radestown, together with a short length of 12 in. diameter cast iron pipe, intake works, sluice valves, air valves, and cross-connection, for the U.D.C. Pierce F. Purcell, consulting engineer, Ashton, Killiney, co. Dublin. Deposit, £3.

MARCH 3.—**Cheadle and Gatley.**—SEWER.—Construction of 1,693 yds. of 12 in. sewer and 2,643 yds. of 9 in. sewer, with necessary manholes, flushing chambers, ventilating shafts, &c., for the U.D.C. R. Hewson Molyneux. Deposit £2 2s.

MARCH 3.—**Hove.**—MAKING-UP.—Making up roadway, laying new paving, and other works in connection therewith in Boundary-road, between Hallyburton-road and Old Shoreham-road, for the T.C. Borough Surveyor.

MARCH 3.—**Paignton.**—MAIN.—Laying of a 15 in. diameter cast iron main, with contingent and subsidiary works, from the Council's Works on Dartmoor to Park Hill Cross, a distance of 12¾ miles, for the U.D.C. F. W. Vanstone & Sons, engineers, Torbay Chambers. Deposit, £3 3s.

MARCH 4.—**Southend-on-Sea.**—MAKING-UP.—Of Crosby-road, Durham-road, Herschell-road, and St. Clement's-avenue, and incidental works in connection thereto, for the C.B. R. H. Dyer, Borough Engineer and Surveyor. Deposit £2 each.

MARCH 5.—**Leicestershire.**—RECONSTRUCTION.—Of main roads in bituminous materials and reinforced concrete, for the C.C. J. E. Blackwall, County Surveyor, Grey Friars, Leicester.

MARCH 6.—**Stainburn.**—WIDENING.—Removal of a cottage and the widening of the road in Stainburn Village for a length of 80 yds., for the Cumberland C.C. G. O. Lockwood, A.M.Inst.C.E., County Surveyor, The Courts, Carlisle. Deposit £1.

MARCH 8.—**Skegby.**—SEWER.—Construction of about 4,500 lineal yards of 8 in., 9 in., 12 in. and 15 in. stoneware pipe sewers; the construction of manholes, ventilators, flushing tanks, detritus tanks, settling tanks, storm water tanks, percolating filters, mud draining beds, and laying out sewage disposal works and other appurtenant works, at Blidworth, for the R.D.C. W. Preat, Chartered Civil Engineer, Bank-street-chambers, Bradford. Deposit, £5.

MARCH 8.—**Workington.**—DRAINAGE.—Of fifty houses, for the T.C. H. B. Williams, Borough Engineer and Surveyor.

MARCH 9.—**Doncaster.**—SEWERAGE.—For 5 ft. diameter sewer, storm overflow bays, inlet channel, screening chambers and screen house, detritus tanks, new pumping station sub-structure and super-structure, storm-water tanks, sludge lagoons, culverts, 18 in. cast-iron rising main, three cottages, roads, fencing, &c., and 3,138 lin. yds. of egg-shaped sewers varying from 5 ft. 6 in. by 3 ft. 8 in. to 3 ft. by 2 ft., and 4,193 lin. yds. of sewers varying in diameter from 21 in. to 9 in., and 1,273 lin. yds. of circular sewer, varying from 27 in. to 12 in. diameter, for the T.C. F. Oscar Kirby, Borough Engineer, 2, Priory-place. Deposit, £5 5s.

MARCH 11.—**London.**—SEWER.—Construction of about 410 ft. of 4 ft. × 2 ft. 8 in. brick sewer beneath Paper-street, and the re-inverting of about 100 ft. of brick sewer in Whitecross-street, and contingent works, for the Corporation. City Engineer, Guildhall, E.C. 2. Deposit, £2 2s.

MARCH 13.—**Millom.**—WIDENING.—The Whitehaven to Barrow main road, near Millom, for the Cumberland C.C. G. O. Lockwood, Chartered Civil Engineer, County Surveyor and Bridge Master, The Courts, Carlisle. Deposit, £2.

Competitions.

(*See Competition News page* 308.)

Auction Sales, Tenders, etc.

★FEBRUARY 22.—**London.**—Veryard & Yates will sell, without reserve, at 367 and 369, Norwood-road, S.E., useful timber and building materials, from demolition of the above premises. Auctioneers, 365, Norwood-road, S.E.27.

FEBRUARY 23.—**Cheam.**—J. T. Skelding & Co. will sell, *re* H. Heather Co., Ltd, by order of the liquidator, unreserved sale of the builders' and contractors' stock-in-trade, new and nearly new plant and tools, sectional and temporary buildings. Auctioneers, 48, Gresham-street, Guildhall, E.C.2.

FEBRUARY 23.—**London.**—Hampton & Sons will sell (in conjunction with G. E. Sworder & Sons), at the St. James' Estate Rooms, 20, St. James'-square, S.W. 1 (unless previously sold), in one or five lots, freehold residential property known as "Westfield House," Bishops Stortford, with vacant possession, together with building land, Auctioneers, 20, St. James'-square, S.W. 1.

FEBRUARY 23.—**London.**—Joseph Hibbard & Sons will sell first portion, without reserve, by order of Messrs. Allnatt, Ltd., upon the premises, Depot 2703, Willesden-lane (10 minutes from Acton, N. Station, C.L. Railway), stock of S.H. timber and stores, rolled glass, steam piping, electrical fittings, joinery, &c. Auctioneers, Newington Green, Islington, London, N.16.

★FEBRUARY 24.—**Watford.**—Charles R. Davis & Co., will sell, under a D.A., *re* Wilfred E. Ellis, by order of the Trustee, at the yard and building site, Watford-road, Watford, stock-in-trade and plant of a builder and contractor. Auctioneers, 285, Borough High-street, London, S.E.1.

★FEBRUARY 25TH AND 26TH.—**Ayrshire.**—Howells, Ltd., will sell, within Eglington Castle, Irvine, Ayrshire, interior and exterior fixtures and fittings. Auctioneers, 18, George-street Edinburgh.

★MARCH 2 AND FOLLOWING DAYS.—**Hoddesdon, Herts.**—Charles R. Davis & Co. will sell, by order of John Alfred Hunt (Hoddesdon), Ltd., who are ceasing to carry out any further large contracts from Hoddesdon, at the yards and workshops, Brockett-road, three days' unreserved sale of the whole of the builders', contractors', and decorators' stock-in-trade, plant and machinery. Auctioneers, 285, Borough High-street, London, S.E.1.

★MARCH 2.—**London.**—Joseph Hibbard & Sons will sell, without reserve, by order of Messrs. A. J. Smith & Co. (who are removing to Cudworth-street, Bethnal Green), upon the premises, 532 to 534, Arnold-road (close to Bow Station), stock and plant of timber merchants. Auctioneers, Newington Green, Islington, London, N.16.

★MARCH 3.—**Foot's Cray, Kent.**—Veryard & Yates will sell, without reserve (near "Black Horse," Sidcup), at Mr. Readhead's Farm, Mount Culver, useful timber and building materials. Auctioneers, 365, Norwood-road, S.E.27.

MARCH 3.—**Twickenham.**—Nightingale, Page & Bennett, in conjunction with John D. Wood & Co., will sell, on the premises, Orleans House, fitments of this historical mansion, handsome Georgian return staircase in oak, &c. Auctioneers, N. P. & B., Eagle Chambers, Kingston-upon-Thames and Claremont House, Surbiton, and J. D. W & Co., 6, Mount-street, W.1.

MARCH 5.—**Norwich.**—Messrs. Spelman have received instructions from the executors of the late Mr. E. W. D. Potter to sell, at the "Royal Oak," Norwich, in lots: (1) Freehold property, stonemason's yard, with office and house, as a going concern; (2) stabling; and (3) house and gardens. Auctioneers, Norwich and Great Yarmouth.

MARCH 9.—**London.**—W. W. Howard Bros. & Co., in conjunction with Joseph Hibbard & Sons. Public sale will take place by order of the Government of Burma, in the Small Hall, Winchester House, Old Broad-street, London, E.C.2, without reserve, of stock of Burma hardwoods laying at Crown Wharf, Canning Town, London, E., and Tower Wharf, Southampton. Auctioneers, 15, Newington Green, Islington, London, N.16.

MARCH 10.—**Middlesex.**—Garrett, White & Poland will sell at the London Auction Mart, 155, Queen Victoria-street, E.C., freehold building land of about 59 acres, with over 5,000 ft. of road frontage, together with five cottages. Auctioneers, 17, Hanover-street, W., and 42, Poultry, E.C.

Public Appointments.

★FEBRUARY 20TH.—**Luton.**—ARCHITECTURAL ASSISTANT FOR HOUSING SCHEME.—Temporary appointment required by the Borough Council. Borough Engineer, 18, Upper George-street, Luton.

★FEBRUARY 22.—**Norwich.**—GENERAL DRAUGHTSMAN.—Required by the Corporation in the City Engineer's Department. J. S. Bullough, A.M.Inst.C.E., City Engineer, Guildhall, Norwich, endorsed "General Draughtsman."

FEBRUARY 26.—**Belfast.**—Architect, highly qualified and thoroughly experienced, required by the Education Committee to devote the whole of his time to the duties of the office. R. Meyer, Town Clerk, City Hall, Belfast.

FEBRUARY 26.—**Bermondsey.**—District Surveyor for the district of Bermondsey required by the L.C.C. Clerk to the Council, The County Hall, Westminster Bridge, S.E.1.

★FEBRUARY 26.—**Exeter**—GENERAL ASSISTANT.—Required by the City Council, with experience in measuring for repairs, dilapidations, and painting; levelling and surveying. John Bennett, City Architect.

★FEBRUARY 27.—**Yeovil.**—Clerk of Works required for erection of new Municipal offices, public library, and museum. H. C. C. Batten, Town Clerk, Yeovil.

★FEBRUARY 27.—**Wakefield.**—Qualified Quantity Surveyor's Assistants required by the C.C. Louis J. Newton, Lic.R.I.B.A., West Riding Quantity Surveyor, County Hall, Wakefield.

★MARCH 1.—**Cheshire.**—Deputy County Architect required in the County Architect's Department by the C.C. H. Beswick, F.R.I.B.A., County Architect, Newgate-street, Chester.

MARCH 1.—**Margate.**—Clerk of Works required in connection with erection of 72 non-parlour type houses, for the Borough of Margate. Edward Brooke, Town Clerk, 13, Grosvenor-place, Margate.

★MARCH 2.—**Durham.**—Building Inspector and Clerk of Works in the County Engineer, Surveyor and Architect's Department required by the County Council. William J. Merrett, County Engineer, Surveyor and Architect, 43, Old Elvet, Durham.

★MARCH 4.—**London.**—Clerk of Works to supervise the erection of houses on the Central site, East Ham, required by the Corporation. C. Eustace Wilson, Town Clerk, Town Hall, East Ham, E.6.

★NO DATE.—**London.**—Architectural Assistants for temporary engagements in the Architect's Department of the London County Council. Architect to the Council, The County Hall, Westminster Bridge, S.E. 1.

★NO DATE.—**London.**—Assistant Secretary to the Surveyors' Institution. Age from 30 to 40. The Secretary, Surveyors' Institution, 12, Great George-street, Westminster, S.W.1.

★NO DATE.—**Sierra Leone.**—Quantity Surveyor required for the Public Works Department of Sierra Leone, for two tours of 12 to 18 months' service, with possible extension. Apply at once, Crown Agents for the Colonies, 4, Millbank, Westminster, S.W.1, quoting M/14277.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B.E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board.

BATLEY.—The Corporation are to borrow £16,800 for the purpose of erecting 40 non-parlour type houses on the Ealand-road and Anne-street estate.

BATTLE.—The East Sussex E.C. recommend the building of handwork centres.

BINGLEY.—The M.H. has held an inquiry into the proposal to erect new Council garages.

BIRKENHEAD.—The Corporation has prepared plans for houses to be erected on the Hoylake site.—Sanction is being sought to borrow £46,000 for the erection of flats on the Dell estate.

BIRMINGHAM.—Land is to be purchased in Birchfield-road, for a branch bank.—The T.C. has decided to approve of proposals for the laying of a third pipe on certain of the siphon sections of the Elan aqueduct with the object of increasing the capacity of the aqueduct. The scheme will cost about £75,000.—The Council has approved a proposal to provide a new laundry and kitchen on Corporation land at the disinfecting station in Bacchus-road. The M.H. has already approved the proposal.—The E.C. recommend that application be made to the B.E. and the M.H. for sanction to borrow £1,950 for the purchase of a site for the erection of a school in Hancock-road.—The E.C. also recommend that, subject to the approval of the B.E. and the M.H., land for school sites on the Pype Hayes estate be transferred to the E.C.—Land is to be purchased in the Stechford district for the purpose of erecting a branch bank, at the corner of Lyttleton-road and Station-road, for the sum of £450.—The Water Committee has approved of the purchase of 52, Sandwell-road, Handsworth, for £1,900, with 4¼ acres of adjoining land, at £700 per acre, and the freehold premises, 50, Sandwell-road, for £825, in connection with the proposed provision of a new service reservoir at Handsworth.—The Trustees of the King's Heath Baptist Church have purchased a site, having a frontage to Brook-lane.—Messrs. Mitchell & Butler, Ltd., of Cape Hill Brewery, have in contemplation alterations and improvements to the "Clarendon" public-house at Longton. Plans have been prepared by J. H. Beckett, architect, Market-street, Longton.

BLACKPOOL.—The Building Plans Committee passed plans: E. Saville, 14 houses, Saville-road; Coleridge Estate Syndicate, seven houses, George-street; J. England & Son, 10 houses, off Bispham-road; Blackpool Corporation, 26 houses, Hawes Side-lane and Powell-avenue.

BOLTON.—The Corporation are to invite tenders for the construction of a mess room at Wellington depot.—New public conveniences are to be erected in Victoria-square.

BRAINTREE.—The Essex County Architect has prepared plans for the erection of a combined cookery and handicraft centre, the cost being estimated at £2,650.

BRENTWOOD.—The Essex C.C. has decided to erect a treatment clinic in New-road, at a cost of £2,150.

BRISTOL.—Messrs. J. S. Fry & Sons, Ltd., are shortly to commence the erection of further new buildings at their factory at Summerdale Keynsham. Plans are being prepared by the company's engineers.

BROMLEY.—The M.H. has sanctioned the borrowing by the T.C. of £2,220 for the purchase of land on the Downham Estate as a site for a public elementary school.

BURGESS HILL.—The East Sussex E.C. recommend the provision of additional accommodation at the Junction-road schools and London-road schools.—The East Sussex E.C. recommend the erection of handwork centres.

CARDIFF.—The Tramways and Electricity Committee have partly approved the scheme for the suggested new road from the Hayes (Cardiff) over the Glamorgan Canal to Frederick-street and the desirability of providing new offices and showrooms for the Cardiff electricity and tramways departments on the site of the suggested road.

CARLOW.—The Mental Hospital Committee has decided to take steps to obtain a loan of £15,000 for the purpose of erecting new buildings at the hospital.

CHERTSEY.—The R.D.C. propose to build 24 or 28 cottages at Byfleet.

CHESTER.—The City Surveyor submitted draft plans showing proposed extensions to the administration block at the Isolation hospital, and the T.C. have considered the plans. The Sub-Committee visited the Queen-street slaughterhouse and considered the question of providing additional lairage accommodation for cattle and sheep, and resolved that the building adjoining the south side of the slaughterhouse be obtained for the purpose of providing additional lairage accommodation.—Application is to be made to the M.H. for sanction to borrow an additional loan of £175 for constructing a reinforced concrete raft under the houses to be erected on the south side of Cherry-grove site.

CHICHESTER.—The Corporation have decided to erect a further 18 houses on the Kingsham estate.

COVENTRY.—Plans have been prepared for the reconstruction of the railway bridge in Humber-road, the cost being estimated by the Warwick County Surveyor at £3,700.—The City Council has decided to apply for sanction to a loan of £114,000 to purchase land for housing, parks, and allotments.

CROWBOROUGH.—The East Sussex E.C. recommend the building of a senior school. It is also recommended to erect handwork centres.

CROYDON.—The C.B. recommend that application be made to the M.H. for sanction to erect 520 houses.—The Council recommend the purchase of an additional area of about 60 acres of land for housing purposes.—The Committee recommend that a concrete wall 6 ft. high be erected around the Children's Medical Homes adjoining the housing estate at Waddon, at an estimated cost of £1,450.—The C.B. propose to carry out an electricity scheme at an estimated cost of £59,008.—The M.H. has sanctioned the borrowing of £18,000 out of the £21,000 in respect of the purchase of the Convent estate at Woodside.—The Borough Road Surveyor has estimated the work of adapting the lodge at the Convent estate for conveniences, and providing land drainage for the lower portion of the ground, at £300.—The M.H. has given formal approval to the borrowing of £7,682 for the erection of 12 additional cottages at the Croydon Mental Hospital.

DARENTH.—The M.A.B. recommend that, subject to the sanction of the M.H., approval be given to the rebuilding of the boiler-house at the Southern Hospital and to the installation of two Lancashire boilers in place of three dryback boilers in connection with the scheme for the improvement of the heating and hot-water supplies at the Southern Hospital, at an estimated additional cost of £1,600.

DOUGLAS (I.O.M.).—Plans have been prepared for the erection of a new grand stand in connection with Tourist Trophy Races. The Borough Engineer is to prepare plans for additional slipper baths. The Corporation are to proceed with the extensions at the Villa Marine Pavilion.

EAST GRINSTEAD.—The East Sussex E.C. recommend the erection of a senior school. Handwork centres are also to be erected.

EAST MOLESEY.—The erection by private enterprise of about 100 houses, costing £1,600 each, is proposed.

EAST SUSSEX.—The C.C. propose to carry out large road repair schemes.

EPPING.—A drill hall is to be built at a cost of £6,500 for the local detachment of the Essex Regiment (Territorial Force). Messrs. C. Maidwell & Co., builders, Great Finborough, Stowmarket. Messrs. Roddick, Calvin & Clark, 4, Adelphi-terrace, Strand, W.C., architects to Essex Territorial Force Association.

EPSOM.—The U.D.C. has decided upon the construction of a new reservoir at a cost of £16,500.

EVERTON.—The trustees of "The Home," Everton-terrace, have had plans prepared for increased accommodation which is estimated to cost £2,000.

EXHALL.—The Warwickshire E.C. has decided to build the Ash Green school.

FISHBURN.—The Northern Colliery Housing Association has prepared a scheme for the erection of houses.

FOLKESTONE.—The T.C. resolved that the present entrance to the ladies' convenience from the Ladies' Room at the Library be stopped up, that a fresh entrance be made opposite the steps leading up to the Museum, and that the Borough Engineer be instructed to carry out the work.—Sanction has been received to a loan of £2,170 for the erection of public conveniences in Pleydell-gardens, Cheriton-road, and Foord-road, and tenders are shortly to be invited for the construction.—The Council resolved that the sum of £120 be included in the draft estimates for the erection of a shelter, &c., at the entrance to the Corporation housing estate, Canterbury-road.—The Council has accepted a tender for the erection of a cricket pavilion at the Sports-ground.—The Corporation are proposing to build a shelter at Skel Arch, Dover-road. Tenders are shortly to be invited for the erection of the main convenience at the Sports-ground.

GODSTONE.—Alterations and additions are to be made to the casualty wards of the Godstone Infirmary. Mr. E. A. Swan, Architect to Board of Guardians. Oxted, Surrey.

HAILSHAM.—The East Sussex E.C. propose to build new handwork centres.

HAMPSHIRE.—The C.C. have prepared a draft scheme for the establishment of an institution for about 500 mental defectives, the cost being estimated at £155,000.

HASTINGS.—The Electricity Committee has received an offer of a piece of land abutting on Hollington-lane, for the erection of a sub-station in connection with the supply of electricity to premises on the Grove estate, which they have accepted.—The Parks and Gardens, &c., Committee recommended that a public convenience for ladies on the West Hill be provided at a cost of £548, on the south side of Wellington-road.—Plans have been approved for the building of a block of shop property on a site at St. Leonards, to the design of P. H. Oxley, architect, 29, Havelock-road.

HAYWARDS HEATH.—A school is being proposed by the East Sussex E.C. A scheme is also afoot for handwork centres.

HEATHFIELD.—The East Sussex E.C. recommend the erection of handwork centres.

HEBBURN.—The Works Committee of the D.C. has agreed that application be made to the M.H. for sanction to build 50 three-roomed houses and 27 four-roomed houses to complete the Black-road scheme, and also for four houses to complete the site at Hedgeley-road.

HILLMORTON.—A site at Hillmorton Paddox has now been secured by the Warwickshire E.C. for the erection of an elementary school.

HOCKLEY HEATH.—A site of one acre has been acquired by the Warwickshire E.C. for the enlargement of the elementary school.

HOLBECK (LEEDS).—Plans have been prepared for the erection of a new Roman Catholic church. The architects are E. Simpson & Sons, of Manningham.

HORNCHURCH.—New premises are to be added to the factories in Hornchurch-road, of Messrs. The Art Metal Construction Co., Ltd., of Holborn, W.C.

HOVE.—The East Sussex E.C. propose to erect new schools.

HULL.—Messrs. Crickmay, Crickmay & Wintle, 26, Hart-street, Bloomsbury, W.C., have presented plans for the carrying out of extensive alterations at the George Hotel in Whitefriargate, including the erection of a tea lounge, quick lunch bar, &c. The cost is estimated at £7,000.—The Corporation have obtained sanction to borrow £1,500 for the construction of a concrete wall at the Ferens boating lake.—A refreshment pavilion is to be erected in East Park at a cost of £1,750.—A scheme is to be prepared for the extension of the Grammar School.

HURSTPIERPOINT.—The East Sussex E.C. recommend the building of handwork centres.

HYDE.—The General Purposes Committee of the T.C. has decided to recommend the Council to apply for sanction to borrow £20,000 for the building of a Central School on the Greenfield site.

ILFORD.—The U.D.C. are inquiring for additional accommodation for the Albert-road welfare centre. New books, to cost £2,000 are to be obtained, and store-room accommodation is to be provided at the central library.—Plans and estimates are to be prepared by the surveyor to the U.D.C. for the erection at the Isolation Hospital of a ward block of eight beds on the cubicle system, with an operating theatre attached, and alterations of Ward Block 3 to provide a further four or five cubicle wards.—Nearly 160 houses are embraced by a housing scheme which Hobbs Bros propose to carry out by instalments.

IPSWICH.—The E.C. propose to erect a school for physically defective.

KINGSTON.—The E.C. has decided to accept a tender of £12,641 for new buildings at Kingston Grammar School, and to request the Surrey E.C. to apply for sanction to a loan.

LARNE (IRELAND).—The U.D.C. has decided to erect a convenience in Tower-road by direct labour. Mr. J. A. Caskey is the surveyor.

LEAMINGTON.—The Corporation has prepared a scheme for the provision of a dust destructor, at a cost of £13,500.

LEAVESDEN.—The M.H. has sanctioned to the M.A.B. the expenditure of £9,482 for the erection of a nurses' home at Leavesden Mental Hospital.

LEEDS.—The T.C. passed plans: W. Rodgers & Co., Ltd., 12 semi-detached houses, East Moor-crescent and Talbot-crescent, Roundhay; J. Pullan & Sons, 35 houses, Cross Flatts-grove, Wooler-avenue, Firth-grove and Fifth-avenue, Beeston.

LEICESTER.—Sanction to the building of the proposed extension to the Leicester Colleges of Art and Technology has been given by the Leicester City Council.

LETCHWORTH.—A model abattoir is being erected for the Society for Prevention of Cruelty to Animals, at a cost of about £30,000. The first section is being built by Messrs. John Willmott & Sons, builders, 80, Walsworth-road, Hitchin, Herts. Mr. R. S. Ayling, F.R.I.B.A., architect, 53, Victoria-street, Westminster, S.W.1.

LEWES.—The East Sussex E.C. propose to erect new schools.

LEYLAND.—The U.D.C. are to build 10 more houses.

LINDSAY.—The C.C. propose to erect new Health Department offices at Newlands, at an estimated cost of £10,800; also a new bridge at Pilfrey Bolton, at a cost of £7,500.

LINGFIELD.—The L.C.C. Education Committee has decided to enlarge the epileptic colony, at a cost of £5,000.

LONDON.—The M.H. has approved the proposal of the M.A.B. to provide additional accommodation for the nursing staff at "D" block at The Downs Hospital for Children.—The M.H. has approved also the spending of £160 by the M.A.B. in respect of the provision of additional accommodation at St. Anne's Home.

LONDON (ALEXANDRA PARK).—St. Saviour's Church, Alexandra Park, is to have a new £5,224 hall.

LONDON (BERMONDSEY).—The B.C. is to erect 22 houses on various sites to rehouse displaced tenants. Culpin & Bowers have prepared revised plans for the erection of 54 houses on the Salisbury-street area.

LONDON (BOW).—The L.C.C. Education Committee has decided that the new elementary school to be erected on the Back Alley site, Bow, shall have accommodation for 740 children and planned for enlargement by 256 places.

LONDON (CAMBERWELL).—The B.C. recommend that certain necessary interior decorative and other works at the Church-street, Dulwich, Old Kent-road and Wells-street Public Baths be carried out by direct labour under the supervision of the Borough Engineer, at an estimated cost of £262 15s.

LONDON (CHELSEA).—The B.G. has applied for £25,000 loan for hospital extension.

LONDON (CHISWICK).—The Middlesex C.C. has decided to widen Gunnersbury-lane to a width of 100 ft. at a cost of £84,907.

LONDON (CITY).—The Corporation recommend that tenders be invited for alterations to Male Ward No. 5 of the City of London Mental Hospital, the approximate cost being £4,750.

LONDON (DEPTFORD).—The B.C. recommend that application be made to the L.C.C. for the advance of £23,675 for buildings and £10,407 for machinery in connection with the Evelyn-street Baths.

LONDON (DULWICH).—A new Moslem mosque is to be built at Dulwich. The site and plans of the new mosque are under consideration, and building is expected to begin at an early date.

LONDON (EAST HAM).—The Engineer and Manager are to submit estimates for the erection of a sub-station at Manor Park.—Plans passed: Five houses, 196–204, Sheringham-avenue, eight houses, Elsenham-road, eight houses, Elsenham-road, corner of Dersingham-avenue, for J. Stokes & Sons.

* See also our List of Contracts, Competitions, etc.

LONDON (FULHAM).—The M.H. has sanctioned to the M.A.B. the expenditure of £481 for the adaptation of isolation block A at the Western Hospital for the purposes of an operating theatre.—Sanction has also been received to the expenditure of £291 for the conversion of Wards 11 and 12 at the Western Hospital into isolation accommodation.—Funds amounting to £80,000 are being raised to rebuild its Jubilee Hospital, Lillie-road.—A new employment exchange is to be built in Wyfold-road.—The B.C. recommend that application be made to the L.C.C. for £23,114 in connection with the Wyfold-road housing scheme.

LONDON (HACKNEY).—The B.C. passed plans: J. Jarvis & Sons, Ltd., factory for Hunt & Partners, Ltd., Theydon-road; A. J. King, Ltd., factory, 19, Buckingham-road; L. H. & R. Roberts, superstructure of the Hackney Institute at the corner of Dalston-lane and Amhurst-road; A. J. King, Ltd., factory, 57, Downham-road; J. Jarvis & Sons, Ltd., electricity substation at the rear of the northern side of Mapledene-road.

LONDON (HAMMERSMITH).—The L.C.C. recommend the borrowing by the B.C. of £23,375 for housing purposes within the borough.

LONDON (HOLBORN).—The L.C.C. recommend the borrowing by the B.C. of £1,712 for housing purposes.

LONDON (ISLINGTON).—The L.C.C. recommend the adaptation of 32, Drayton-park as a schoolkeeper's house.

LONDON (LAMBETH).—The M.H. has no objection to the proposal of the M.A.B. to extend the lavatory accommodation in the yard at Lambeth Casual Ward.—The M.H. has sanctioned the scheme of the B.C. for the erection of 108 dwellings on the site of the Princes-street Workhouse, at a cost of £75,250.

LONDON (LEWISHAM).—The B.C. has decided to acquire compulsorily 43 acres of land at Grove Park, and to proceed with a housing scheme.

LONDON (PUTNEY).—The L.C.C. recommend that the freehold of 230 and 232, Putney Bridge-road, be sold for £469 to the Blue Halls, Putney, Ltd., for extension work.

LONDON (SHOREDITCH).—The B.C. has prepared plans for increasing the office accommodation at the town hall, at a cost of £5,000, so that there will be possibilities for a future extension to provide accommodation for the maternity centre, at a cost of about £4,000.

LONDON (WANDSWORTH).—The L.C.C. recommend the borrowing by the B.C. of £23,500 for housing purposes within the borough.

MALDON.—The Essex C.C. has acquired a site for the erection of a treatment centre, to cost about £2,000.

MANCHESTER.—Work is soon to be commenced on the new buildings for the Board of Management of the Manchester Northern Hospital for Women and Children. The cost is estimated at £150,000. The plans prepared by Colonel Westcott, architect, 13, Bridge-street.

MARGATE.—It is hoped to launch an appeal to the public for funds to enable the proposal for the provision of more adequate buildings for the hospital to be carried out.

MARSHFIELD.—The Cheshire C.C. has prepared a scheme for widening the bridge and approaches, at a cost of £5,500.

MARSTON GREEN.—The Warwickshire C.C. has acquired a site for the erection of police cottages.

MERSEY.—The drainage officer of the Cheshire C.C. is preparing a scheme for the repair of the banks of the River Mersey, work estimated to involve an expenditure of £40,000.

MILL HILL.—A building of two floors is being erected at the Mill Hill laboratories of the Medical Research Council, Adelphi, Strand, W.C. Messrs. Forsyth & Maule, architects, 12, Stratford-place, W.1. Messrs. Holloway Bros. (London), Ltd., builders, Bridge Wharf, Grosvenor-road, Westminster, S.W.

MORTLAKE.—A chapel is to be built in the new cemetery.

NEWCASTLE.—The managers of the Royal Victoria School for the Blind have prepared plans for new buildings, at a cost of £8,000.—The Durham County Surveyor and Newcastle Corporation Engineer are to prepare a report in regard to the strengthening of Scotswood bridge.

NEWICK.—The East Sussex E.C. recommend the erection of handwork centres.

NEWPORT (I.O.W.).—The Borough Engineer is to prepare estimates for extending the Guildhall conveniences.—A scheme is to be prepared for the erection of non-parlour houses on the Elm-grove site.—Tenders are to be invited for the quay wall extension scheme.—A reinforced concrete road is to be constructed at Blackhouse Quay.—The Borough Engineer is to prepare plans for a new poultry market, in South-street.

NORMANTON (YORKS).—The U.D.C. are to invite tenders for the erection of 34 houses on the Hanson House estate.

NORTHWICH.—The Weaver Navigation Trustees are negotiating with the Cheshire C.C. regarding the strengthening of the Northwich bridges.

NOTTINGHAM.—A site of over one acre of land at Netherfield has been secured by the Rev. J. Toomey, of the Church of the Sacred Heart, for the erection of a church, schools, and presbytery.

NOTTS.—The C.C. has now prepared plans for three bridges to replace level crossings at Barnby, Crow Park, and Muskham, at a total cost of £73,500.

OLD TRAFFORD.—A large residential house, known as "North Leigh" situate at the junction of Seymour-grove and Chorlton-road, is to be converted into a large residential hotel, for the Manchester Brewery Co.

ORFORD.—Funds are being raised by the members of the Parish Church for the erection of a new parish hall.

ORSETT.—The Essex E.C. are to prepare plans for the erection of an elementary school, for the accommodation of 400 scholars, at an estimated cost of £12,500.

PEACEHAVEN.—The East Sussex E.C. Sub-committee recommend the erection of a school on the Telscombe Cliffe estate.

PENZANCE.—Additional lavatory accommodation is to be provided at the town hall, at a cost of £600.

PLYMOUTH.—The Housing of the Working Classes Committee inspected the following sites, acquired or proposed to be acquired for the purpose of housing, viz., Corner of Battery-street and George-place; field, Mt. Stone, Cremyll-street; premises, Strand-street; Stonehall; and Curtiss'-yard, Valletort-place, and resolved that the Borough Surveyor be instructed to prepare plans and specifications for (*a*) three-storied dwellings with four bedrooms at the Battery-street site; (*b*) three-storied dwellings in the Strand-street site.—Provision is to be made for additional dressing accommodation, at an estimated cost of £13,250; and application be made to the M.H. for sanction to borrow the sum for the work.—The C.B. are to make application to the B.E. for the purchase of 32, Ker-street for £1,200, for the provision of elementary domestic work.—The Council has approved the provision of improved branch library accommodation.—The Borough Surveyor submitted a plan and estimate of £240 for adapting the site under the Guildhall platform as a service and cloak room. The Council approved the scheme.—The Borough Surveyor submitted plans and estimates for the provision of a crematorium at the Efford Cemetery and the Weston Mill Cemetery.—The C.B. has received sanction to loan £11,291 for the erection of 24 flats at Pottery Quay.—At a cost of £852, the Borough Surveyor is to carry out the scheme for reconstructing the tramways shelter at Prince-rock, for use as a public convenience and for the erection of a new convenience in Phœnix-street.—To provide for additions to their branch premises in Bedford-street, and Westmill-street, the Midland Bank, Ltd., have bought 15-16, Bedford-street. Plans for the alterations required are in the hands of Messrs. Whinney, Son, & Austen Hall, architects, 8, Old Jewry, E.C. 2.

PORTSLADE.—The U.D.C. are pressing the M.H. to sanction the scheme for the erection of 36 houses on the Shelldale estate.—The East Sussex E.C. propose to build new handwork centres.

PRESTON.—The M.H. held an inquiry into a new town-planning scheme for Preston. When the work now in progress is completed there would be a boulevard along the north bank of the river Ribble from Broadgate to London-road, and under the new scheme it was proposed to continue this to Brockholes Bridge which would make a river boulevard of about four miles.

PURLEY.—The corner premises in Brighton-road and Chipstead Valley-road are to be converted into branch bank premises for the National Provincial Bank, Ltd., to plans prepared by Mr. J. Armitage, architect, 115, Gower-street, Bloomsbury, W.C.

RAMSBOTTOM.—The Rev. J. McGuinness, of St. Andrew's R.C. Church, is proposing to erect a new school and parochial hall. The plans are being prepared by Messrs. Barker & Higson, architects, 21, Wood-street, Bolton.

RAMSGATE.—A new nurses' home is to be built at the Ramsgate General Hospital. Plans are being prepared by Mr. W. T. Stock, architect, 57, Queen-street.

RICHMOND.—A new wing for garage and residential purposes is to be added to the Richmond Hill Hotel. Messrs. E. D. Winn & Co., Ltd., builders, 32, Lowndes-street, S.W.1. Messrs. Hore & Wheeler, architects, 22, Portman-street, W.1.

RINGMER.—New handwork centres are being proposed by the East Sussex E.C.

ROBERTSBRIDGE.—The East Sussex E.C. propose building handwork centres.

ROCHDALE.—Sanction has been received from the M.H. for borrowing powers to the extent of £38,800 in respect of further houses and street works at Turf Hill, and for £36,777 for a similar purpose on the Clarke's-lane site.

RYE.—A scheme is being proposed by the East Sussex E.C. Sub-Committee for the building of a school for 250 children.

SALFORD.—The C.B. has approved a resolution of the Improvement Committee recommending the Council to make application to the M.H. for sanction to borrow £8,000 to cover the cost of setting back the existing boundary wall on the Hart Hill estate.

SCUNTHORPE.—The L.N.E.Ry. propose improved railway facilities in the district. The scheme of improvements includes the removal of the existing passenger station at Frodington to a site a short distance to the west, and other works.

SEAFORD.—The East Sussex E.C. propose erecting handwork centres.

SELBY.—Sanction has been given by the M.T. to the East Riding C.C. for the construction of an additional arterial roadway from Barlby Landing, on the East Riding side of the River Ouse at Selby, to the Boothferry-road.

SELSTON.—Building estates on the main road from Nottingham to Newhaven, at Selston, are to be developed by the Selston Housing Syndicate and Messrs. James Oakes & Co.

SHEFFIELD.—The Sutton Trustees propose to put in hand the development of an estate they have acquired, and present plans provide for the building of about 150 houses. The architect is H. J. Potter, 8, St. James'-street.—The members of St. Oswald's Church Millhouses, are raising funds for the erection of a new parochial hall.—The members of the Endcliffe Park Congregational Church are hoping to build a new church in the near future.

SMETHWICK.—The M.H. has approved the erection of a further 28 houses, subject to the Council amending their estimate for the 24 houses in Manor-road to £450 per house, and forwarding formal sanction to the borrowing of the sum of £11,400, to cover the cost of such houses.—Plans passed: Ten houses, Holly-lane, for R. G. & H. D. Strong.

SOLIHULL.—The Warwickshire E.C. are to purchase Malvern House and grounds for purposes of a secondary school for girls. The cost of adaptation is estimated at £17,000.

SOUTHALL.—The Working Men's Club has decided to build new premises at Featherstone-terrace.

SOUTHALL-NORWOOD.—The U.D.C. passed plans for 25 houses, Leamington-road, for E. Clark.—The Surveyor was instructed to invite tenders for the consideration of a convenience at Southall-green.

TENDRING.—The Essex E.C. has approved plans for extensions, to cost about £550, at the St. Osyth elementary school.

TEWKESBURY.—The Borough Surveyor has prepared plans for the erection of a further 12 houses on the Prior's estate.—The widening of John's bridge is under consideration.

TICEHURST.—The East Sussex E.C. propose the erection of handwork centres.

TORQUAY.—Parties concerned are to discuss unofficially with the Corporation proposals for the Winter Garden and Rendezvous. Thirty-five acres on the Cary estate are to be purchased for a housing scheme. Plans have been prepared for the erection of 56 houses on the Hale-road site. A scheme has been prepared for the erection of a central depot and stores. The E.C. has decided to erect a practical instruction centre at West Hill.—Plans have been prepared by Bridgman & Bridgman, architects, 1, Palace-avenue, for the erection of a new branch on the site of the old Half-moon Hotel, in Union-street, for Messrs. Lloyds Bank, Ltd., of London.

UCKFIELD.—The East Sussex E.C. propose to build handwork centres.

WALTHAMSTOW.—The Essex E.C. has arranged for the erection of the Monoux Grammar School by direct labour, at a cost estimated by the County Architect at £43,250.

WARRINGTON.—The Corporation has acquired 6, Horsemarket-street for conversion into an electricity department showroom. Plans by Mr. S. P. Silcock, architect, 6, Egypt-street.—The B.G. has purchased the Lovely-lane site for proposed extensions to the Hospital.—The Manchester and District Farmers' Co-operative Association, Ltd., are to make additions to their Warrington Mill for storage and garage purposes, at an estimated cost of £900.

WATFORD.—The Corporation are to invite tenders for the erection of 122 houses on the Harebreaks estate. The M.H. has held an inquiry into the scheme for the extension of the market. The Committee of the Peace Memorial Hospital propose the erection of a mortuary, chapel, and garage. A committee are dealing with the provision of railway sidings for the highways and electricity departments.—The T.C. passed plans for 12 houses, Osborne-road, for A. & L. Wilkins.—Plans have been approved for the building by the Watford Co-operative Society, Ltd., St. Albans-road, of a new dairy, stores, &c., in Brixton-road. Mr. L. G. Elkins, F.R.I.B.A., 99, Leman-street, E.1, architect to Wholesale Co-operative Society, Ltd. (Southern District).—The B.G. are negotiating for a site in Leggatt's-road for the erection of children's homes.

TRADE NEWS

The existing asphalt surface on a section of Frederick-street, Oldham, is being removed and replaced with asphaltic slag by Messrs. William Shepherd & Sons, Ltd., Milkstone, Rochdale.

Change of Address.

Mr. Horace V. Clogg, builder and contractor, of Vallance Works, 81, Vallance-road, E.1, has removed from that address to larger premises at 159–161, Hanbury-street, E.1.

Concrete Mixer and Tile Machine.

Messrs. Winget (1924), Ltd., of Winget House, Grosvenor-gardens, Westminster, S.W.1, have produced two new models of the above machines. The 4½ cu. ft. semi-spiral wet concrete mixer embodies many improvements. The roofing tile machine, with standard outfit for making concrete "Broseley" tiles, has an output of 80 per day.

The Blue Circle.

We have received the January *Blue Circle*, a magazine issued quarterly from Portland House, Tothill-street, Westminster, S.W.1. This number is as amusing as any of its predecessors; bright articles and humorous verse are interspersed with photographs and clever sketches. This type of staff journal should help materially in creating good feeling between employers and employees.

Midland Bank, Ltd.

The general meeting of shareholders of the Midland Bank, Ltd., was held at the Cannon-street Hotel, E.C.4, recently, when it was stated that the capital and reserve fund now amounted to over twelve million pounds, the increase of £688,561 being due to the issue of new £1 shares at the price of £2 per share; the current, deposit and other accounts amounted to £348,862,135; the profit for the year is £2,522,469; the dividend is 18 per cent.

PRICES CURRENT OF MATERIALS

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at		Best Blue Pressed Staffs	9 5 0
King's Cross	2 13 3	Do. Bullnose ..	9 15 0
Do. grooved for Plaster	2 15 3	Blue Wire Cuts	7 5 0
Do. Bullnose ..	3 8 3		
Best Stourbridge Fire Brick :—			
2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers	21 10 0	D'ble Str'tch'rs	30 0 0
		D'ble Headers	27 0 0
		One Side and two ends	31 0 0
Headers	21 0 0	Two Sides and one End	32 0 0
Quoins, Bull-nose and 4½ in. Flats	28 0 0	Splays and Squints	29 10 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. „ „	2 4	4 in. „ „	3 6

	s. d.	
Thames Ballast	10 6	per yd.
Fit Sand	13 9	„ „
Thames Sand	14 6	„ „
Best Washed Sand	14 6	„ „
½ in. Shingle for Ferro-Concrete	12 9	„ „
¾ in. „ „	14 0	„ „
¾ in. Broken Brick	11 6	„ „
Pan Breeze	7 6	„ „

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test £2 18 0 to £3 3 6 5/s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement (Waterproof)	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
„ „ Pink	5 10 0
Plaster, Coarse, Pink	3 0
„ „ White	3 12 6
„ Fine	5 12 0
Strapite, Coarse	3 9 0
„ Finish	3 17 0
Grey Stone Lime	2 11 9
Chalk Lime	2 11 9
Best Ground Blue Lias Lime	2 4 6
Hair	32 0 0
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dp.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	2 11½

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4
Do. do delivered on road wagons at above stations, per ft. cube	4 5

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

	s. d.
HOPTON-WOOD STONE—Delivered at any Goods Station, London.	
Small random blocks, up to 10 ft. cube. P. ft. cb.	7 0
Random blocks from 10 ft. and over „	17 0
Sawn two sides „	27 0
Sawn three or four sides „	32 0

YORK STONE, BLUE—*Robin Hood Quality.*

	s. d.
Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super.) Per ft. super	5 6
6 in. rubbed two sides, ditto „	6 0
3 in. sawn two sides slabs (random sizes) „	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) „	1 6½
1½ in. to 2 in. ditto, ditto „	1 4

HARD YORK—

Delivered at any Goods Station, London.	
Scappled random blocks Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super	5 1½
6 in. rubbed two sides, ditto „	6 1½
4 in. sawn two sides slabs (random sizes) „	2 10
3 in. ditto ditto „	2 1½
2 in. self-faced random flags Per yd. super	9 0

ARTIFICIAL STONE.

Delivered in London Area in full van loads, per ft. cube :—Plain, 8s. 6d.; Moulded, 9s. 6d. Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£28 0	3 × 6	£21 0
4 × 9	25 0	3 × 11	25 0
4 × 8	24 0	2 × 11	25 0
4 × 7	23 0	3 × 9	24 0
3 × 8	21 0	2½ × 9	23 0
3 × 7	20 0	3 × 4½	22 0
2½ × 7	20 0	3 × 4	22 0

PLANED BOARDS.

1 × 11	£27 0	1 × 9	£26 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	20/-	1¼	31/-
⅞	22/-	1½	34/-
1	25/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	Inches.	per sq.
1	25/-	¾	16/6
1¼	31/-	⅞	19/-
1½	34/-	1	24/-

MATCHING (BEST).

Inches.	s. d.
2 × 2	2 6 per 100 ft.

BATTENS.

SAWN LATHS.

Per bundle	0 2 4

1" AND UP THICK.

	£ s. d.		£ s. d.
Dry Austrian Wainscoat, per ft. cube	0 16 0	to 0 18 0	
Dry American and /or Japanese Figured Oak, ft. cube	0 15 0	to —	
Dry American and/or Japanese Plain Oak, ft. cube	0 11 0	to 0 13 0	
Dry sq. edged Honduras Mahogany, ft. cube	0 16 0	to 0 18 0	
Dry Log cut Honduras Mahogany, ft. cube	0 18 0	to 1 1 0	
Dry Cuba Mahogany, ft. cube	1 4 0	to 1 10 0	
Dry Teak, ft. cube	0 13 0	to 0 15 0	
Dry American Whitewood, ft. cube	0 11 0	to 0 14 0	
Best Scotch glue, per cwt.	4 10 0	to —	
Liquid Glue, per cwt.	4 7 0	to 5 10 0	

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 12 6
Ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Machine-made	0 9 0

METALS.

	£ s. d.
JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—	
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
„ Stanchions	16 10 0
In Roof Work „	19 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
⅜ in.	12 0 0	⅝ in. to ½ in	10 15 0
¾ in.	11 0 0	⅝ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Black Gas	60 %	50%	60%
Galvanised Gas	45 %	40%	50%
Blue Water	55 %	45%	55%
Galvanised Water	38½%	35%	45%
Red Steam	50 %	40%	50%
Galvanised Steam	32½%	30%	40%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/2½	11½d.	3½d.
3½ in.	1/4	1/0½	3½d.
4 in.	1/5	1/2½	3½d.
4½ in.	1/6½	1/4	4½d.
5 in.	1/9½	1/5½	5½d.

O.G. GUTTERS.

3 in.	1/7	1/3½	3½d.
3½ in.	1/7	1/3½	3½d.
4 in.	1/8½	1/4	3½d.
4½ in.	1/10½	1/6½	4½d.
5 in.	2/3	1/9½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/9½	1/2½	1/8½
2½ in. „	1/11½	1/4	2/0½
3 in. „	2/4½	1/8	2/6
3½ in. „	2/10	2/-	2/10½
4 in. „	3/3	2/4½	3/6

L.C.C. COATED SOIL PIPES—London Prices, ex Works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 11	2 3	2 9
2½ in. „	3 5	2 6	3 5
3 in. „	4 1	2 9	4 0½
3½ in. „	4 5½	3 5	4 8½
4 in. „	4 11½	3 9½	5 5½

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe.	Bends, stocks angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	4 3	5 9	7 8
4 in. „ „	6 3	6 11	9 6
5 in. „ „	7 10	12 0	16 3
6 in. „ „	9 6	15 0	20 9

Gasken for jointing, 38/6 per cwt.

	Per ton in London.		
IRON—	£ s. d.		£ s. d.
Common Bars	13 0 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 5 0	..	15 5 0
Staffordshire "Marked Bars"	16 5 0	..	17 5 0
Mild Steel Bars	10 0 0	..	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	..	11 0 0
Hoop iron, basis price	12 0 0	..	13 0 0
„ Galvanised	27 0 0	..	28 0 0
Soft Steel Sheets, Black—Ordinary sizes to 20 g.	13 5 0	..	14 5 0
„ „ „ 24 g.	14 5 0	..	15 5 0
„ „ „ 26 g.	16 5 0	..	17 5 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	..	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 10 0	..	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 10 0	..	20 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	18 10 0	..	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	19 0 0	..	20 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	22 0 0	..	23 0 0
Sheets Galvanised Flat. Best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	22 0 0	..	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 0 0	..	26 0 0
Best Soft Steel Sheets, 26 g.	25 10 0	..	26 10 0
Cut Nails, 3 in. to 6 in.	19 0 0	..	20 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	46 10 0
Pipe in coils	48 0 0
Soil Pipe	50 0 0
Compo Pipe	51 0 0

NOTE—Country delivery, 30s. per ton extra: lots under 3 cwt., 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	32 0 0	—
Do., ex country, carriage forward per ton	33 0 0	—

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 1
Strong sheet „	1 0
Thin „	1 1
Copper nails „	2 3
Copper wire „	2 4

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in
41/6	62*-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1½ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1½ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- „

TIN—English Ingots, 2/9 per lb. SOLDER—Plumbers' 1/2, Tinmen's 1/5. Blowpipe 1/6 per lb.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 1
„ „ „ in barrels „	0 3 3
„ „ „ in drums „	0 3 6
Boiled „ „ in barrels „	0 3 6
„ „ „ in drums „	0 3 9
Turpentine in barrels „	0 5 6
„ in drums (10 gall.) „	0 5 8
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	55 15 0
GENUINE WHITE LEAD PAINT—"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered	75 15 0
Red Lead, Dry (packages extra) per ton	49 0 0
Best Linseed Oil Putty per cwt.	0 15 0
Filocol „	0 15 6
Size, XD Quality „	fkn. 0 3 6

Continued on next page.

*The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per Ft.		Per Ft.
15 oz. fourths ..	3½d.	32 oz. fourths	8d.
15 „ thirds	4½d.	32 „ thirds	9½d.
21 „ fourths ..	4 d.	Obscured Sheet, 15 oz.	4d.
21 „ thirds	5¾d.	„ „ 21 „	5¾d.
26 „ fourths ..	5½d.	Fluted 15oz. 6¾d., 21oz. 9¾d.	
26 „ thirds	7¼d.	En'lled 15oz. 5½d., 21oz. 7¼d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4½d.
⅛ Rough rolled	5½d.
¼ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.		Per Gallon £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Flatting	ditto	1 0 0
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 6
Best Black Japan		0 10 6
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 6
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebine		0 9 0
Cuirass Black Enamel		0 7 0

Glasgow.—BRIDGE.—The Glasgow Corporation Sub-Committee on Cross-river Communication has approved of plans for a proposed high-level bridge over the Clyde at Finnieston. It is understood that the bridge will cross the river at a height of 76 ft. above high tide, and that the approaches will be constructed on the north side from a point near Finnieston-street or Stobcross-street, and the south from two points, one near Paisley-road Toll and the other near Govan-road. The estimated cost is about £1,000,000.

THE SCOTTISH BUILDER

GLASGOW HOUSING

THE Housing Committee has received the following from various local contractors :—

Messrs. Mactaggart & Mickel, Ltd., suggest the construction of a further 1,000 houses at Knightswood housing scheme at the prices in their present contract.

Messrs. J. MacDonald (Contractors), Ltd., propose that they should proceed with the further development of the Knightswood scheme on terms to be based on their previous tender.

Messrs. J. Train & Co., Ltd., offer to build 1,000 houses anywhere within the city boundaries, on either one or two sites, for £390 each.

The Unit Construction Co., Ltd., undertake to erect 3,000 houses.

Mr. A. Gilchrist, president of the Scottish Building Contractors' Association, offers to find suitable contractors to erect houses in accordance with the plans and specifications submitted by the Housing Department, for £415 for the N.2 type and £455 for the C.1 type, at the rate of 500 houses per annum.

Messrs. R. Sproul & Son, Ltd., Cambuslang, offer to build three-apartment houses, four to the block, on the "Dennis Wild" system, at from £402 to £419 7s. per house, according to the number to be erected. This offer the Committee recommend for acceptance by the Corporation, the number to be 300 houses at £406 each.

Housing Progress in Scotland.

The following figures show the progress made in State-aided housing schemes in Scotland to January 31, 1926 :—

	Completed.	*Under Construction.*
1919 Act	25,365 ..	173
Private Subsidy Schemes	2,324 ..	—
Slum Clearance Schemes	2,451 ..	2,888
1923 Act—		
By Local Authorities ..	1,199 ..	2,302
By Private Enterprise	5,041 ..	3,095
1924 Act—		
By Local Authorities ..	606 ..	5,109
By Private Enterprise	4 ..	25
Demonstration Houses ..	14 ..	3
	37,004	13,592

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur :—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons', Bricklayers', Plasterers'.
Aberdeen	1/8	1/8½	1/8	1/8	1/8	1/8	1/7	10½d. to 1/1
Airdrie	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3
Alexandria	1/8	1/8	1/8	1/8	1/8	1/8	—	1/2½ to 1/3½
Arbroath	1/7	1/7	1/7	1/7½	1/7	1/7	1/5½	1/1½
Ayr	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3
Bathgate	1/8	1/8	1/8	1/8½	1/8	1/8	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Coatbridge	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3 to 1/3½
Dumbarton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dumfries	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dundee	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Dunfermline	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Edinburgh	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Glasgow	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Greenock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/0½ to 1/3½
Hamilton	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½
Inverness	1/5	—	1/5	1/4	1/5	1/5	1/4	1/- to 1/2
Kilmarnock	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkcaldy	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/8	1/8	1/8	1/9	1/8	1/8	1/6	1/0 to 1/3
Leith	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Motherwell	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Perth	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3
Stirling	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Stirlingshire (Eastern District)	1/8-1/10	1/8 1/10	1/8	1/9	1/7	1/8	1/6½	1/3½
Wishaw	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 385.

NEW BUILDINGS IN SCOTLAND

Aberdeen.—ADDITIONS.—The managers of the Royal Infirmary are to carry out structural additions to the out-patient department, the alterations on the balconies of the Mount Stephen Medical Pavilion, and the establishment of a preliminary training school for infirmary nurses.

Aberdeen.—HOUSES.—Plans of 10 houses to cost £9,880, and nine other buildings and alterations to be erected for £2,626, have been passed by the Plans Committee of the Aberdeen Town Council.

Arbroath.—IMPROVEMENTS.—The question of the proposed extensive improvements on the interior of the Webster Memorial Hall have again been considered by the Town Council. The Burgh Surveyor gave the probable cost of the proposed structural alterations and improvements suggested by the Halls Committee at £2,000.

Bo'ness.—HOUSES.—The Town Council have finally adjusted their estimates for 44 houses at Deanfield-road and Cowdenhill, and already a start has been made at the latter site.

Clydebank.—HOUSES.—The Town Council has decided to build 170 houses of the poured concrete type at West Kilbowie. The cost will be £72,500. The Council has also decided to build 100 houses of the "Atholl" type.

Coatbridge.—HOUSES.—The Town Council have resolved to recommend that 500 houses be erected within the Burgh, and application be made for the loan of £200,000. The scheme will include 250 houses of two apartments, 200 three apartments, and 50 four apartments.

Craigewan.—The Peterhead Feuars' Managers recommend that a scheme be put forward for the provision of a refreshment room and shelter at Craigewan. The scheme will cost about £800.

Crieff.—VARIOUS.—The Finance Committee of the Town Council has submitted a proposal for borrowing the purchase price of the new park in Comrie-road, the building of pavilion, and the formation of tennis courts, £2,000.

Dunblane.—HALL.—The trustees of the Victoria Hall have decided to have a new hall on a new site. The hall is estimated to cost about £10,000.

Dunfermline.—EXTENSION.—The managers of the Dunfermline and West Fife Hospital have received from a citizen who desires to remain anonymous an offer to furnish the grounds of Priory adjoining the hospital buildings for addition to the hospital.

Edinburgh.—HOUSES.—The Dean of Guild passed plans for the Corporation to erect 36 two-apartment houses at Lochend.

Ellon.—HOUSING.—The Town Council has resolved, on the recommendation of the Housing Committee, to purchase a piece of ground on Commercial-road for the erection of dwelling-houses.

Glasgow.—SUBWAY.—The Corporation Tramways Committee has generally approved of proposals for the removal of the present subway station in St. Enoch-square, and the construction of new entrances to the underground railway. The work, it is estimated, will cost £16,000, in addition to the price to be paid for three railway arches.——STREET.—The General Finance Committee of the Glasgow Corporation has approved of the construction of a street along the right-of-way on the south bank of the River Clyde, from Rutherglen-road northwards, in connection with a proposed housing scheme in M'Neil-street. Plans showing a street 36 ft. wide have been approved. The Committee recommend that the piling on the river bank should be repaired at an estimated cost of £6,500, while the estimated cost of the proposed street has been put at £2,000.

Lanarkshire. — HOUSES. — The Scottish National Housing Co. propose to erect 250 steel houses—100 of the Weir type, 100 of the Atholl type, and 50 of the Cowieson type—in the Middle Ward District of Lanarkshire.

CURRENT PRICES FOR BUILDING WORK IN LONDON

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	32	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	8	6
¾ inch on flats in two thicknesses	" "	6	3
Angel fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors, and partitions	" "	6	0
Do. trusses	" "	8	6

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal-edges shot	per sq.		44/6	53/-	60/6
Do. tongued and grooved	"		49/-	57/6	65/-
Do. matchings	"	45/-	51/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super.	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail: average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roof work	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	60	6
Do. Do. in flats	"	59	0
Extra labour and solder in coated cesspools	each	0	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	4
Do. Do. Sirapite	" "	2	7
Do. Do. Keen's	" "	3	7
Add sawn lathing	" "	1	7
Add metal lathing	" "	2	6
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	8½
26 oz. Do.	" "	1	0
Obscured sheet	" "	1	1
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	10½
¼ in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10 % on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.

ALSAGAR.—Repairing culvert at Arclid, for Cheshire C.C. :—
*J. Edwards & Son £217

ARMLEY.—Branch premises for the Leeds Permanent Benefit Building Society in Town-street, Armley. Mr. Wain, architect :—
*J. Walker, Armley.

ASHWELL (HERTS).—Additions and alterations at the Rectory, for Rev. H. A. Griffith. Mr. W. B. Stonebridge, F.R.I.B.A., architect, Bedford :—
W. French £2,232
T. Robson & Son..... 2,025
Bailey & Co. 1,900

BARNSLEY.—Office buildings in Peel-street, for the Yorkshire Mutual Trading Co. Mr. C. F. Moxon, architect and surveyor, Regent-street South, Barnsley :—
Mason and brickwork—C. W. Squires, Ltd., Barnsley.
Joiners—W. Goodyear & Son, Barnsley.
Slaters—Kemp & Co., Swinton.
Plasterers—Dryden & Sons, Barnsley.

BARNSLEY.—Structural alterations to platform buildings at Barnsley Court House Station, for the G.C. section of the L. & N.E.R. Co. :—
*Chadwick & Co. (Rotherham), Ltd.

BEBINGTON AND BROMBOROUGH.—Seventy-two houses at Bebington and twenty-eight at Bromborough, for the U.D.C. Surveyor :—
J. Wild & Co., Manchester £54,676
A. H. Boulton, Rock Ferry 53,960
H. G. Jones, Rock Ferry..... 52,228
P. McLachlan, Warrington..... 51,210
Selwood Lloyd & Co., Rock Ferry 50,852
J. Davies, Birkenhead..... 50,068
H. Higgins & Sons, Wrexham 49,048
*J. Merritt, Birkenhead 48,992
A. Edwards, Willaston 47,440

BELFAST.—For (1) additions to Roslyn-street school, and (2) additions and tar-paving at Skegoniel school, for the C.B. Education architect :—
(1) *Thos. McKee & Sons, Belfast..... £669 13 3
(2) *W. Kerr, Belfast..... 1,266 1 0

BIDDENHAM (BEDS).—Additions to Murree Cottage, for Mr. E. C. Gardiner. Mr. W. B. Stonebridge, F.R.I.B.A., architect, Bedford :—
C. Negus..... £780
Jacobs & Burton 711
*W. T. Revitt, Olney 689

BIRKENHEAD.—Construction and erection of a pair of steel dock gates for the new 80 ft. inner passage, Alfred Dock, for the Mersey Docks and Harbour Board :—
*Sir W. G. Armstrong, Whitworth & Co., Ltd.

BIRMINGHAM.—Covering of the Erdington reservoir in reinforced concrete, for the T.C. :—
*Wilson Lovatt & Sons, Ltd.

BIRMINGHAM.—Three new pavilions, two isolation blocks, and a nurses' home, at the Little Bromwich Hospital, for the T.C. :—
*C. Bryant & Sons, Small Heath £28,970

BLACKPOOL.—Bank at the corner of Red Bank-road and Queen's-drive, Bispham, for the Messrs. Williams Deacon's Bank. Messrs. Lumb & Walton, L. & F.R.I.B.A., architects :—
*J. Heap & Sons, Ltd., South, Blackpool.

BLETCHLEY.—Sixty-eight cottages, for the U.D.C. :—
*Tranfield, Howard Perry & French, Bletchley £35,940

BLETCHLEY.—Bungalow at The Homestead, for Miss Sinfield. Mr. W. B. Stonebridge, F.R.I.B.A., architect, Bedford :—
H. P. Dawson £1,295
F. C. Parry 1,075
Howard Bros. 989
Perry Bros. 834
*W. T. Revitt..... 830

BOURNEMOUTH.—New First Church of Christ Scientist, together with Sunday School. Mr. W. J. Dacombe, Lloyds Bank-chambers, Boscombe, Bournemouth, architect :—
*Burt & Vick, Poole.

BRADFORD.—Offices at St. James's Wholesale Meat Market, for the Compania Sansinena de Carnes Congeladas, for the T.C. :—
*R. H. Clark..... £114 10

BRADFORD.—Rebuilding the "Gardeners' Arms," Great Horton, for Messrs. B. Y. B. :—
*W. Garnett & Co.

BRADFORD.—Reconstruction of premises at Haigh's Yard, Manchester-road, for Messrs. Isaac Naylor, Ltd. Messrs. Thos. Barker & Son, architects, Bradford :—
*Raper & Dobson, Ltd.

BRADFORD.—Reconstruction of club-house for the Golf Club at Hawkesworth. Messrs. Barker & Morley, architects :—
*A. Robinson, Idle.

BRIDLINGTON.—New banking premises, for the Yorkshire Penny Bank, Ltd. :—
*H. E. Turner, Ltd., York.

BRIGHTON.—Additions to the premises of the Royal Alexandra Hospital for Sick Children. Mr. W. H. Overton, 22, Ship-street, Brighton, architect :—
*F. Palmer, Brighton.

BRISTOL.—Houses, for the T.C. :—
Fishponds—
‡H. E. Green—10 parlour .. £453 per house
Knowle—
‡Roe & Gadd—4 parlour and 20 non-parlour..... 453 „ „
Bedminster Down—
‡C. Zwart—14 non-parlour .. 453 „ „

BRISTOL.—Erection of Hillfields Park Council school, for the E.C. :—
Builder's work—
‡E. Walters & Son £10,984 0 0
Plumber's work—
‡A. & J. Tutcher 370 1 8
Heating apparatus—
‡Spry & Holman 409 18 4

BURNLEY.—For works in connection with construction of gasworks, for the T.C. Mr. A. Race, Borough Engineer; quantities by the Engineer :—
P. Lind & Co., Westminster .. £6,998 6 4
J. Byron, Bury 6,929 18 0
Matthews & Mumby, Manchester 6,340 0 0
Grays F. C. Co., Ltd., Glasgow .. 6,163 18 9
F. C. Construction Co., Derby .. 5,909 0 0
B. Smith & Son, Burnley 5,800 0 0
Rainey Bros., Barrow-in-Furness 5,700 0 0
Smith Bros., Burnley 5,655 11 0
M. & J. W. Heap, Burnley..... 5,470 0 0
W. & J. Sykes, Middlesbrough .. 5,231 7 7
R. & T. Howarth, Rochdale 5,220 0 0
*Wellerman Bros., Sheffield 4,859 8 3

BURNLEY.—Construction of a concrete raft and other work for the foundations of the shop property to be erected in St. James'-street, for the Corporation :—
*Rainey Bros., Ltd., Barrow-in-Furness £2,083

CALNE.—Four houses, for the T.C. Mr. W. Herbert Bateman, F.S.I., L.R.I.B.A., surveyor and architect :—
*C. Syms & Sons, Calne £1,576

CHESTER.—Six houses on the Bottoms-lane site, for the City Council :—
*Universal Housing Co., Ltd..... £2,841

CHIPPING NORTON.—Concrete reservoir and pumping station, for the R.D.C. Mr. A. T. Green, surveyor. Quantities prepared by the surveyor :—
Bartlett Bros., Witney £950 0 0
Greenly & Sons, Ludlow 895 10 3
Lewis, Chipping Norton 873 10 0
Wm. T. Nicholls, Ltd., Gloucester 839 0 0
Godwin Quenington, Fairford.. 781 9 11
Bosworth Wadeford, Daventry 729 0 0
Bridge and Engineering Co., Banbury 716 4 3
A. Graves & Sons, Milton-on-Wychwood 696 0 0
*Rowell & Sons, Chipping Norton 597 13 4

CLARE.—Improvements at the sanatorium, for the Committee :—
L. Blake £548
O'Neill 540
Griffin 500
*J. Daly, Ennis 410

COVENTRY.—Branch premises in Clay-lane, for Messrs. Barclays Bank, Ltd., London. Messrs. Peacock & Bewlay, architects, 83, Colmore-row, Birmingham :—
*T. Elvin & Son, Birmingham.

CROYDON.—House and shop on the Woodside housing estate, at the junction of Long-lane and Spring-lane, for the C.B. :—
‡J. H. Martin, Croydon £1,333 6 11

DEWSBURY.—Structural alterations at Earlsheaton Park Mansion, for the Corporation :—
Masons—*J. Scott & Sons, Dewsbury.
Plumber—*F. Newsome, Dewsbury.
Plasterers—*A. Idle & Sons, Bradford.
Painter—*J. Gee, Dewsbury.

DONEGAL.—Rebuilding the Court-house, for the C.C. :—
*P. Diver, Donegal £1,021

DUBLIN.—Tenders accepted by the Commissioners of Public Works for January :—
Limerick Military Barracks, erection of residence for officer commanding district—*A. P. Watkinson, Dublin.
Callan Garda Siochana Station, co. Kilkenny, restoration—*Connolly & Cullen, Kilkenny.
Cong Garda Siochana Station, co. Mayo, restoration—*M. Bermingham, Ballindine.
Eglinton-street Garda Siochana Station, Galway, restoration—*P. Dooley, Galway.
Leenane Garda Siochana Station, co. Galway, restoration—*P. Burke, Ballindereen, Kiciolgan, co. Galway.
Macroom Garda Siochana Station, co. Cork, restoration—*J. M. O'Keeffe, Mallow, co. Cork.
Tipperary Garda Siochana Station, co. Tipperary, restoration—*Barry & Cavanagh, Tipperary.
Irish Land Commission, Upper Merrion-street, Dublin, installation of electric light—*Handley & Robinson, Ltd., Dublin.
Munster Institute, Cork, installation of electric light—*Brooks, Thomas & Co., Ltd., Dublin.
Long Island National School, co. Cork, building and furnishing—*P. Arundel, Schull, co. Cork.

DUDLEY.—Erection of a public house in Highfield-road, for Messrs. Julian Hanson & Sons, Ltd. Mr. A. T. Butler, architect, Priory-street :—
*J. Dallow & Sons, Birmingham.

DUKINFIELD.—Twenty houses, for the Dukinfield Housing Committee. Mr. J. Gibson, architect, Ashton-under-Lyne :—
*T. Woolley & Sons, Ashton-under-Lyne, £8,440

DUNSTABLE.—For conversion of old National School into a parish hall. Mr. W. B. Stonebridge, F.R.I.B.A., architect, Bedford :—
A. W. Oakley, Luton £1,359
C. Miskin & Sons..... 1,320
Summerfield & Son 1,240
*W. Watson, Dunstable 1,195

DURHAM.—Ten houses at Whinney Hill, for the T.C. :—
*Mr. White £4,160

ENNISTYMON.—Repairs to the Court-house, for the Clare C.C. :—
M. Linnan, Ennistymon £285 5 6
*W. McInerney, Kilrush 259 0 0

EPSOM.—Houses, for the R.D.C. :—
*Keast & Broomfield, 20 houses, Cheam £9,630
*H. H. & F. Roll, 16 houses, Burgh Heath 7,960
*H. H. & F. Roll, 20 houses, Tadworth.. 10,091
*H. H. & F. Roll, 30 houses, Cobham.. 16,432

FELSTEAD, ESSEX.—Factory for Messrs. Anglo-Scottish Beet Sugar Corporation, Ltd., 116, Hope-street, Glasgow. Messrs. Duncan Stewart & Co., London-road Ironworks, Glasgow, consulting engineers :—
*Francis Perks & Son, Ltd., Northampton.

GARGRAVE (YORKS).—New police station, for the West Riding C.C. Mr. P. O. Platts, A.R.I.B.A., architect :—
*Wm. Cowgill, Earby, N. Yorks.

GOODWICK.—House, for Mrs. Bowen. Mr. D. F. Ingleton, L.R.I.B.A., architect and surveyor, 11, Victoria-place, Haverfordwest :—
John Thomas, Fishguard £1,987 0
Brodog Timber Mills, Fishguard .. 1,944 0
D. J. Williams, Porth, Glam. 1,780 0
W. J. Evans, Goodwick 1,571 0
J. Lloyd Thomas, Goodwick 1,482 10
*Levi George, Trevine 1,375 0

GRANGE-OVER-SANDS.—Bungalow, for Mr. S. H. Neave. Messrs. Settle & Brundrit, A.R.I.BA., architects :—
*Rainey Bros., Ltd., Barrow-in-Furness.

HARROGATE.—Parade room at the Harrogate Court House, for the West Riding C.C. Mr. P. O. Platts, A.R.I.B.A., architect :—
*Wm. Birch & Sons, Ltd., York.

HARTISMERE.—For a pair of cottages at (*a*) Redgrave, (*b*) Wortham, and (*c*) Wortham, for the R.D.C. Mr. B. Catchpole, Mellis Eye, Suffolk, architect and building surveyor :—
*D. Goddard & Son, Redgrave .. (A) £825 0
(B) 825 0
*E. Churchyard, Wortham..... (C) 806 10

HAZEL BRIDGE.—Reconstruction of bridge, for Cheshire C.C. :—
*R. & T. Howarth, Rochdale..... £1,777

HELENBURGH.—Twenty-four houses, for the T.C. Burgh Surveyor :—
Painter—C. Marshall, Glasgow.
Glaziers—Robt. Lindsay, Helensburgh.
Plumbers—McCulloch & Giffen, Glasgow.
Masons—Donaldson & Son, Motherwell.
Joiners—Wm. Jack & Son, Helensburgh.
Plasterers—J. Williamson & Son, Helensburgh.
Slaters—P. White & Co., Glasgow.

HIGHBRIDGE.—Sixteen houses at Burnham-road, and all works connected therewith, for the U.D.C. Mr. E. Binding, surveyor :—
G. V. Sheppard, Highbridge.... £9,500 0 0
Padfield & Sons, Shepton Mallet 9,241 9 0
Thorton Hall, Weston-s.-Mare .. 8,940 0 0
F. G. Cox, Bridgwater 8,352 0 0
*Coles Bros., Highbridge 8,149 10 9
E. A. Gullidge, Basonbridge 7,676 0 0

IPSWICH.—100 houses on the Racecourse site, for the T.C. :—
*Long & Whatling ..... £485 10s. per house.
(Subject to M.H. approval.)

KILRUSH.—Repairs to the Court-house, for the C.C. :—
Simon Cusack, Kilrush £297 10
P. Flanagan, Kilrush..... 294 0
W. McInerney, Kilrush..... 267 0

LEEDS.—Pits, tanks, pump-house, and workshop, &c., for the T.C. Mr. Geo. A. Hart, sewerage engineer :—
*F. Whitaker & Co., Ltd., Leeds.

LEEDS.—Reconstruction of the "Smith's Arms," Marsh-lane, for Messrs. Ind Coope & Co., Ltd. Messrs. A. & F. Mosleys, Ltd., architects, Wormald-row, Leeds :—
*W. T. Pearson, Ltd., Leeds.

LINCOLN.—Offices for the Health Department, at Newland, Lincoln :—
*Wright & Son, Lincoln..... £10,087

LISKEARD.—Two reinforced concrete bridges and two reinforced concrete culverts at Polperro, for the R.D.C. Mr. W. L. B. Smale, surveyor :—

Mitchell & Son, Ltd., Manchester	£2,200 0
Christiani & Nielsen, London	2,049 10
*G. Wimpey & Co., Ltd., London	1,990 0

LIVERPOOL.—Electric sub-station at Hawthorne-road, Litherland, for the Corporation. Surveyor :—

*Bragg & Collins, Walton	£1,608

LIVERPOOL.—Concrete piers, silos for stone handling, for Messrs. F. A. Jones, Ltd., Liverpool. Major C. S. Brothers, A.R.I.B.A., architect, Wellington-buildings, The Strand :—

*Christiani & Neilson, London.

LIVERPOOL.—New schools in the Liverpool Municipal Housing area, for the Catholic children on the Clubmoor, West Derby, and Walton estates. Messrs. L. A. G. Prichard and G. S. Lewis, AA.R.I.B.A., joint architects. Liverpool :—

*R. Wearing & Sons, West Derby.

LONDON.—New laundry at Forest Hill, for the Modern Laundry Co. :—

*E. C. Christmas, Forest Hill	£3,676

LONDON.—Enlargement of the Acre-lane home, Brixton, for the L.C.C. :—

J. Smith & Sons (Norwood), Ltd.	£7,986
H. L. Holloway & Son	7,665
J. & C. Bowyer, Ltd.	7,378
H. Groves & Son	7,336
J. Garrett & Son	7,125
Markham & Markham	6,964
‡Triggs & Co.	6,859

(All of London.)

LONDON.—Adaptation of part of Old Castle-street school, Shoreditch, for the L.C.C. :—

G. B. Farrar & Co.	£317
W. Silk & Son, Ltd.	298
S. Blow, Ltd.	295
G. Barker	284
W. Simms	265
Whitbys, Ltd.	259
Turnbull & Son	259
G. Keetch	231
W. S. Sharpin	218
‡J. & C. Bowyer, Ltd.	212
The architect's comparable estimate	255

(All of London.)

LONDON.—Provision of low-pressure hot-water heating apparatus, at Alton-street, Bow, for the L.C.C. :—

Colley, Meikle & Co., Ltd.	£1,690
J. T. Meredith & Co., Ltd.	1,675
J. Biggs	1,668
J. & F. May	1,626
Clark, Hunt & Co., Ltd.	1,597
Fretwell Heating Co.	1,497
‡Beaven & Sons, Ltd.	1,447
The architect's comparable estimate	1,620

(All of London.)

LONDON.—Adaptation works at the Hammersmith day continuation school, for the L.C.C. :—

G. N. Watts, Ltd.	£498 15
Lole & Co.	489 0
R. Colley & Sons, Ltd.	486 0
H. A. Murphy & Co.	450 0
W. Daley & Co.	449 0
A. & F. Polden, Ltd.	425 0
A. Roberts & Co., Ltd.	400 0
J. P. Williams, Ltd.	390 0
Sims & Russell	370 0
‡W. H. Cooper & Son	319 0
The architect's comparable estimate	384 0

(All of London.)

LONDON.—Remodelling of Alton-street school, Bow and Bromley, for the L.C.C. :—

Colley, Meikle & Co., Ltd.	£1,690
J. T. Meredith & Co., Ltd.	1,675
J. Biggs	1,668
J. & F. May	1,626
Clark, Hunt & Co., Ltd.	1,597
Fretwell Heating Co.	1,497
‡Beaven & Sons, Ltd.	1,447

(All of London.)

LONDON.—Handicraft and science room at the Huntingfield-road school, Putney, for the L.C.C. :—

*T. Brown & Son, Herne Hill	£984

LONDON.—School-keeper's house at Haverstock-hill L.C.C. school, St. Pancras, for the L.C.C. :—

*J. C. Mather	£875

LONDON.—Painting of the first-class swimming bath, for the Fulham B.C. :—

Strongitharm & Sons	£626 8
F. C. Baldwin & Co.	627 0
Swan Bros.	460 0
Christian & Sinclair	444 15
W. R. Marks	423 0
‡W. Marston & Sons	415 0
Savage & Co.	258 0

LONDON.—Sub-station in Gainsborough-road, for the Hackney B.C. :—

Steelwork—*Drew-Bear Perks & Co., London.

LONDON.—Extension to sub-station at Lomas-buildings, Mile End Old Town, for the Stepney B.C. Borough Engineer :—

J. Jarvis & Sons	£8,150 0 0
G. Barker	6,693 0 0
D. G. Somerville & Co.	6,666 10 6
W. Simms	5,117 18 0
‡Structural Engineering Co.	4,859 0 0

(All of London.)

LONDON.—Rebuilding of St. Paul's-road school, Limehouse, for the L.C.C. :—

Haywards, Ltd.	£1,659
J. Combe & Son, Ltd.	1,657
Clark, Hunt & Co., Ltd.	1,567
‡H. J. Cash & Co., Ltd.	1,398
The architect's comparable estimate	1,650

(All of London.)

LONDON.—Erection and fitting up of a stores and garage building at the Electricity Works, Townmead-road : (*a*) complete building with ridge roof, and (*b*) complete building with lean-to roof, for the Fulham B.C. Borough Electrical Engineer :—

	(*a*) £ s. d.	(*b*) £ s. d.
Swan Bros.	1,927 0 0	2,188 0 0
A. & T. Wallis	1,658 0 0	1,728 0 0
D. Rowell & Co., Ltd.	1,679 0 0	1,785 0 0
G. Roberts	1,742 14 0	1,746 10 0
W. J. Marston & Sons	1,875 15 0	1,919 15 0
Lambhill Ironworks, Ltd.	1,699 0 0	1,779 0 0
R. Dixon & Sons	1,738 13 6	1,741 18 9
J. Couper & Co.	1,685 0 0	1,751 0 0
‡Christian & Sinclair	1,560 0 0	1,620 0 0

LONDON.—Fencing at various parks and open spaces, for the L.C.C. :—

*Bayliss, Jones & Bayliss, Ltd.	£1,255 18 0
*T. W. Palmer & Co.	1,297 19 8
*W. Miller & Sons, Ltd.	1,303 11 10
*Hill & Smith, Ltd., Brierley Hill, Staffs	1,338 8 2
*W. Bain & Co., Ltd.	1,584 16 10
*A. R. H. Maxted, Ltd., Bermondsey	1,658 7 6
*J. Salway & Sons, Dartford	1,881 5 1

LONDON.—New bronze metal arcade fronts, for Messrs. J. R. Roberts' Stores, Ltd. Messrs. B. Bainer & Son, FF.R.I.B.A., 121, Victoria-street, S.W.1, architects for the Arcade and the rebuilding of the buildings over :—

*Courtney, Pope & Co.	£11,237

MANCHESTER.—Extension at Goulden-street police station and ambulance station, for T.C. :—

Excavators, &c.—J. H. Billings & Co., Manchester.
Mason—A. Mackay, of Oldham.
Plumbers, Glaziers, &c.—J. Turton & Sons, Manchester.
Plasterers and Painters—Jones & Jackson, Ltd., Manchester.
Smiths, &c.—Redpath Brown & Co., Ltd., Manchester.

MANCHESTER.—Sub-contractors for Moston housing scheme, for the T.C. :—

Slating—
*Alfred Fletcher, Ltd., Blackpool.
Plastering—
*F. Vickers, Blackpool.

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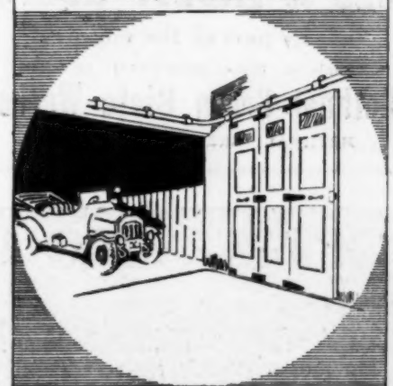

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MANCHESTER.—Construction of railway bridge at Chorlton, for T.C. :—

*Tate & Gordon, Manchester.

MANCHESTER.—Tiling and flooring at baths, for T.C. :—

*Decorative Tiling Co., tiling at Whitworth baths.
*Floorings, Ltd., terrazzo flooring at Mayfield baths and Whitworth baths.
*Marsden & Co., tiling at Mayfield baths and Whitworth baths.

MIDDLESEX.—Further section of the North Circular-road, for the C.C. :—

*W. & C. French	£48,822

MIDLOTHIAN.—Extension at the High School, Dalkeith, for the Midlothian E.C. :—

Painters—

*A. Knowles & Son	£353 17

Electrician and Heating—

*G. Shepherd	250 11
*G. Shepherd	898 0

NAVAN.—Installation of electric lighting at the County Hospital. Mr. N. Healy, engineer, Trim, co. Meath :—

Sean M'Garry, Dublin	£597 19 3
Hewson & Lown, London	560 12 0
Fetherston & Davy, Dublin	498 10 0
D. Thompson & Sons, Limerick	450 0 0
J. A. Quail, Rathmines	412 15 0
Mulligan Bros., Dublin	390 0 0
Patrick Coldrick, Navan, co. Meath	385 0 0
Roche & M'Connell, Dublin	379 0 0
D. Kent, Clonmel, co. Tipperary	356 15 0
A. J. Killeen, Navan	349 18 0
*Gilbert Bros., Navan, co. Meath	310 0 0

NEWTON ABBOT.—Construction of the buildings for the new station at Newton Abbot :—

*A. N. Coles & Son, Ltd., Plymouth.

NOTTINGHAM.—Two new stands and another exit on the pavilion side, for the Nottinghamshire County Cricket Club. Mr. H. H. Goodall, architect, Bridlesmith-gate :—

*Evans & Sons, Bulwell, Nottingham	£8,000

NUNEATON.—Police quarters at Princess-street, for Warwickshire C.C. :—

*Meigh & Green, Nuneaton, erection of drill hall	£722
*Kelly & Sons, Coventry, parade ground	726

PAISLEY.—Works in connection with housing scheme at Neilston-road, for the T.C. Master of Works :—

Brick—John Crawford.
Joiner—Hugh Young & Sons.
Timber—Geo. Martin.
Slater—Keenan & Kelso.
Plaster—David Lang.
(All of Paisley.)

PLYMOUTH.—Repairs, for the C.B. :—

37, King-street, Devonport—

*G. T. Gorvin	£186

35 & 37, Tracey-street and Tracey-cott., Plymouth—

*G. T. Gorvin	143

11, Summerland-street, Plymouth—

*E. Porter	160

4 & 5, Saunders-place, Plymouth—

*E. Porter	352

(In lieu of W. Richardson's tender.)

RAWMARSH.—New public baths, for the U.D.C. Mr. J. A. Tonge, Architect and Surveyor :—

*Building & Engineering Construction, Ltd., Sheffield	£19,645

ROYSTON.—Twenty-two houses on the Pond-street site, for the U.D.C. :—

*Glew Bros., Royston.

SADDLEWORTH.—Police station for the West Riding C.C. Mr. P. O. Platts, A.R.I.B.A., architect :—

*Holroyd, Brook & Eagland, Slaithwaite.

SCARBOROUGH.—New pavilion for the North Cliffe Bowling and Tennis Clubs. Mr. F. Baker, architect, 7, York-place :—

Builder—W. T. Petch & Sons.
Joiner—T. Wilcox.
Plumber—S. Bland & Son.
Painter—A. Hays.
(All of Scarborough.)

SHEFFIELD.—New Out-Patients' department, for the Sheffield Royal Hospital. Mr. H. L. Paterson, F.R.I.B.A., architect, St. James-street :—

*T. Roper & Sons.

SMETHWICK.—Electrical installation, window frames, and heating apparatus at the new secondary school, for the E.C. :—

*H. Hope & Son.

SWANSEA.—Banking premises in Woodfield-street, Morriston, for Messrs. Midland Bank, Ltd., London. Messrs. Whinney, Son & Austen Hall, 8, Old Jewry, E.C.2, architects :—

*J. Pye & Co., Swansea.

SWINTON.—Detritus tanks, screen chambers, sewage tank and motor house, settling tanks, percolating filter, humus tanks, &c., for the U.D.C. :—

*Hayes (Stockport), Ltd., Stockport.

TANFIELD.—Forty-six houses at Burnopfield, for the U.D.C. :—

*Armstrong, Ltd., Blaydon.

TODDINGTON (BEDS).—Eight houses, for the Ampthill R.D.C. Mr. L. Foster, surveyor :—

Stanford & Clark, Maulden	£2,996
W. T. Sharpe, Ampthill	2,840
W. H. King, Silsoe	2,840
T. Briden, Toddington	2,722
J. Arye & Son, Hockliffe	2,705
*W. S. Arnold, Greenfield	2,416

TORRY.—Formation of playgrounds of the new Intermediate School at Torry, for the Aberdeen E.C. :—

Mason work—

*Adam Birnie, Peterhead £11,906 4 10

TULLAMORE.—Tank and pump at the County Hospital, Tullamore :—

*J. J. Donegan, Tullamore..... £230 *

WARRINGTON.—Fifty-eight houses on the Salisbury-street site, for the C.B. Mr. A. M. Ker, Borough Engineer :—

*Cooper & Barnes, Warrington, £412 per house.

WEYMOUTH.—Conveniences in Nothe-walk, for the T.C. Mr. W. A. Jamieson, surveyor and engineer :—

*K. Openshaw, Weymouth £599

WEYMOUTH.—Bowls pavilion in Melcombe Regis-gardens, for the T.C. Mr. W. A. Jamieson, surveyor and engineer :—

*K. Openshaw, Weymouth £482

WINCHESTER.—Forty-two houses at Bar End, for the T.C. :—

{Monolithic Concrete Houses, Ltd., London £16,212
(Subject to M.H. approval.)

WORCESTER.—New public conveniences at Fort Royal Park, for the City Council :—

*E. Woodward £497

WORCESTER.—For (*a*) 16 non-parlour type houses on the Tolladine-road site, and (*b*) six parlour type houses on the Mallow-road site, for the Corporation :—

(*a*) *J. Johnson..... £840 per pair
(*b*) *J. Johnson..... 1,080 „ „

Obituary.

We regret to announce the death of Mr. William Taylor, contractor, of Waitby, near Kirkby Stephen, Westmorland.

The death is recorded of Mr. Edward Hughes, building contractor, of Londonderry.

We regret to record the death of Mr. J. Ragland, of Messrs. J. Ragland & Sons, builders, of Falmouth.

The death has occurred of Mr. George Smith, builder, of Goldthorpe, near Rotherham, at the age of fifty-two.

At the age of eighty-nine years, the death occurred recently of Mr. Joshua Kaye, builder and contractor, of Bradfield, near Sheffield.

Mr. William Sadler, builder and contractor, of Elmham-road, Sheffield, died recently, at the age of forty-seven.

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